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BALTIMORE, JUNE 23, 1910.

WILLIAM A. FALCK.

The sudden and unexpected ending of an illness that was at first hardly regarded as serious comes with a profound shock to the associates of William A. Falck. He had been with us only a comparatively short while, but in that time he had, by zeal in the task set before him, made himself an integral, valuable part of the MANUFACTURERS' RECORD, and by unfailing brightness of disposition had won the affections of everyone in daily touch of him. His career among us may be described in three words—cheerful, zealous, faithful.

LOUISIANA'S POTENTIALITIES IN OIL, GAS AND KINDRED INTERESTS.

Dr. David T. Day of the United States Geological Survey, in a comprehensive article written for the MANUFACTURERS' RECORD of January 7, 1909, covering the oil, gas, sulphur and salt of Louisiana and Texas, said:

It is not too much to say that there is no known locality in the world where the natural resources are so combined as to make possible the production of sulphuric acid, soda, caustic soda and similar products at a lower cost than any place else on earth, and yet the sulphur and salt are produced, and the petroleum as well, have been exported from the State in the crudest possible form, with the least possible utilization of the easily available labor. Ten times the labor could be profitably employed, the population of the regions concerned could be greatly developed, and the wealth of all Southern Louisiana placed in a position comparable with the great chemical centers of Europe, and beyond any place which could be mentioned in the United States. The develop-

ment of such industrial enterprise in the near future is a foregone conclusion. Again, these same conditions make the Louisiana coast the ideal region for oil refining, in connection with the proposed pipe lines direct from the Oklahoma field. At the same time, the ease with which natural gas can be converted into electric-power suggests the practicability of electro-chemical industries on a large scale, etc.

This brief extract from one of the most striking articles which Dr. Day has ever prepared for the MANUFACTURERS' RECORD caused us a few months ago to ask him to make another personal study of the Louisiana and Texas and adjacent oil and gas fields with a view to the preparation of a series of broad articles on the great possibilities in the development of oil, gas, salt and kindred interests. This investigation has recently been completed, and in this week's issue we publish the first of this series of articles by Dr. Day, this one dealing naturally with the tangible development made since the publication of his article a year and a half ago, in the building at Baton Rouge of a great refinery by the Standard Oil Co. representing an investment, so it is understood, of several million dollars. This great enterprise is indicative of what must follow in the way of other refineries or other manufacturing interests, and the suggestion is made by Dr. Day in his previous article of the development somewhere in that section of a vast chemical industry. The resources of Louisiana, Texas and Oklahoma in gas and oil, great as they are, are vastly increased in their importance to the South by other natural resources, the development of which will inevitably follow as an outcome of the utilization of oil and gas and the establishment of such interests as the Baton Rouge refinery.

On June 15 Dr. Day and Dr. Chas. W. Hayes of the United States Geological Survey, by invitation of the Louisiana General Assembly made addresses at Baton Rouge on the mineral resources of that State, broadly outlining some of the great potentialities awaiting development. The address of Dr. Day is published in this issue as supplementary to his article on the Baton Rouge refinery, the building of which marks the inauguration on a very comprehensive scale of a new era of industrial progress in Louisiana. Hardly more than five years ago one of the most active business men in Louisiana, a man of broad general information, in a letter to the MANUFACTURERS' RECORD outlining some of the material possibilities of that State, said in effect:

You know Louisiana has no mineral resources, and hence our advancement must be along other lines.

As we pointed out to him in a letter at the time, he was wrong, but his view was the general impression of Louisiana people and of the world at large as to that State. In that brief period the wonderful developments in oil and gas and sulphur and the discovery of vast salt deposits then unknown, the building of pipe lines and the establishment of the Baton Rouge refinery have given

indications of the wonderful possibilities of Louisiana little dreamed of even five or six years ago.

DANGER AHEAD!

In the past 15 or 20 years there have been several notable instances of Wall Street's use of the Federal Government emphasized and punctuated by the graduation of individuals from the service of the Government into the service of Wall Street influences. The scandal and the danger to the people of this country in such a situation are as nothing compared with the possibilities of scandal and danger suggested in secret legal action by the Government directed against the railroads or other great corporations of national extent. Unquestioned and unrebuked by the intelligence of the country, such practice opens wide the doors to the use of Wall Street by the Government, placing the Government in a position to cow corporations into support of any policy that individuals incontinently entrusted by the people with the great powers of the Government may choose to adopt.

Frying the fat from great interests to meet campaign expenses upon the "blocks-of-five" basis, with the promise of return a hundredfold through special fiscal legislation by Congress; obtaining financial support from criminal organizations with an understanding that they are to have covert special privileges in "colonial possessions," or that the individuals responsible for the crimes are to be immune from persecution and holding up corporations at vital moments in a presidential campaign, whether or not the bargainer wench, are scandalous enough, but are curable, even though the real morality of the people of the country may be obsessed temporarily by the glitter of a morality prone to disorderly conduct.

Once, however, let it be acknowledged that an administration may institute secret legal proceedings against corporations, and, in contempt of court and of the Law, suspend the proceedings at will and in secret, maybe, and not only have insiders in the administration an opportunity to gamble as sure winners at both ends in the securities of the corporations assailed, but the administration itself is given a lever that may overturn any opposition to it, however corrupt and menacing to the liberties of the people and the integrity of the country that administration may be.

FEDERAL FUNDS NOT NEEDED.

In being inspired by the project of drainage of the Florida Everglades to a campaign in Congress for the drainage of swamp lands in Maryland, Congressman George A. Pearre loses sight of the essential fact that Florida is undertaking itself to drain the Everglades. Nothing but far-fetched academic theory can justify as wealthy a State as Maryland in asking aid from the Federal Government in improving its own property. There is nothing in the problem of draining Maryland swamp lands giving the slightest pre-

text for the use of funds from the Federal treasury, and the same thing may be said of most States having wet lands to be reclaimed.

WORLD'S IRON ORE RESOURCES.

Undue apprehension about the continuance of the iron age of the world will be removed by a report issued by the executive committee of the International Geological Congress as a result of the co-operation of scientific authorities in many countries. This shows a total of 22,408,200,000 tons of proved ore supplies, equivalent to 10,191,500,000 tons of metallic iron, and 123,376,600,000 tons of potential ore supplies, equivalent to 53,135,900,000 tons of metallic iron on the globe. The figures by continents are as follows:

Iron-ore Resources in Millions of Tons.

	Actual ore supplies.	Potential ore supplies.	Equivalent metallic iron.	Equivalent metallic iron.
America.....	9,855	5,154.4	81,822.3	40,731.4
Europe.....	12,031.9	4,732.8	41,028.7	12,084.6
Asia.....	290.4	155.5	457	282.8
Australia.....	135.9	73.8	68.6	37.1
Africa.....	125	75
Total.....	22,408.2	10,191.5	123,376.6	53,135.9

* Enormous.

Europe leads in proved ore supplies, 12,031,900,000 tons, of which France is credited with 3,300,000,000 tons; Germany, with 3,007,700,000 tons; Great Britain, with 1,300,000,000 tons; Sweden, with 1,158,000,000 tons; Russia, with 864,600,000 tons; Spain, with 711,000,000 tons; Luxemburg, with 270,000,000 tons, and Austria, with 250,900,000 tons. America, ranking second as to proved ore supplies, 9,855,000,000 tons, ranks first in potential ore supplies, 51,822,300,000 tons. Of the American proved resources, 4,257,800,000 tons are credited to the United States, 3,635,000,000 tons to Newfoundland and 1,903,000,000 tons to Cuba. Of American potential supplies, 75,105,300,000 are credited to the United States.

Of course these figures are by no means final, but may be regarded as representing the minimum, both as to proved supplies and as to potential resources. Even as to the United States the extent of the iron ore resources is not known, and when it comes to Africa with few positive figures, but with statements that the Transvaal has enormous quantities of ore, that Rhodesia and the Anglo-Egyptian Soudan have many millions of tons, and that there are considerable quantities in Egypt, Cape Colony, the German colonies and other dominions, one may be assured that ten years from now, with more complete geological exploration of Asia, Africa and America, the potential ore supplies will be found to be much greater than those credited to the three continents.

WHAT POPULATION HAS THE SOUTH?

If certain provisional estimates by the Census Bureau of the population in this country in 1910 are sustained by the actual census as of April 15, 1910,

the population of the South will show a considerable decline in the rate of increase between 1900 and 1910, in comparison with the rate of increase between 1890 and 1900 and, consequently, a total population in 1910 hardly justified by expectations based upon a careful study of statistics, acquaintance with approved methods of handling figures and some knowledge of tendencies in the movement of population. It is believed, however, that the actual census will not sustain the provisional figures. Upon these estimated figures is based the estimate of the total population in the South in 1910, compared by States with the census totals in 1900 and 1890 in the following table:

State.	1890.	1900.	1910.
Alabama.....	1,513,401	1,828,697	2,143,992
Arkansas.....	1,128,211	1,311,564	1,494,917
Dist. of Col.....	230,392	278,718	327,044
Florida.....	391,422	528,542	696,541
Georgia.....	1,837,353	2,216,331	2,595,309
Kentucky.....	1,858,635	2,147,174	2,435,713
Louisiana.....	1,118,588	1,381,625	1,644,662
Maryland.....	1,042,390	1,188,044	1,333,698
Mississippi.....	1,289,600	1,551,270	1,812,940
North Carolina.....	1,617,949	1,893,310	2,169,671
South Carolina.....	1,151,149	1,340,316	1,529,483
Tennessee.....	1,767,518	2,020,616	2,273,714
Texas.....	2,235,527	3,048,710	3,861,893
Virginia.....	1,655,980	1,854,184	2,062,338
West Virginia.....	762,794	958,800	1,154,806
Total.....	19,600,909	23,548,401	27,526,772

The provisional figures for 1910 give the South a total population of 27,526,772, an increase of 3,978,371 over 1900, which is an increase of but 16.9 per cent. The increase in the South between 1890 and 1900 was at the rate of 20.1 per cent., from 19,000,909 to 23,548,401, or by 3,947,492. Thus there is shown an increase in 1910 over 1900 but 30,879 greater than the increase between 1890 and 1900. That is manifestly absurd. Before getting at the explanation it may be well to refer to other facts.

The rate of increase in population in the whole country between 1890 and 1900 was 20.7 per cent. There was a greater rate in sections outside the South than in the South, which is largely accounted for by immigration from foreign lands. It is hardly likely that this rate has not been maintained during the past ten years in spite of emigration from sections of the Northwest to British America. For, although immigration from abroad declined from the high mark of 1,258,349 in 1907 to 751,786 in 1909, there was an enormous expansion in the first seven years of the decade, and in 1909 the country gained 525,984 in the ebb and flow of this movement of aliens, a notable feature of present-day immigration. Population in the South has been affected comparatively little by this alien immigration, but a fact which must be considered in estimating the increase in the population of the South is the steadily expanding movement to its agricultural regions from other parts of the country. For instance, the increase in Texas between 1890 and 1900 was from 2,235,526 to 3,048,710, or by 813,183, equal to 36.3 per cent. Much of this increase, to be sure, was from other parts of the South. But to it has been added during the past ten years increases from the Middle West and Northwest, and one of the marks is the fact just made known by State Land Commissioner J. T. Robertson that in the past 17 months his department has sold to actual settlers a little more than 5,000,000 acres of land for \$11,175,000. Therefore, the defect in the provisional estimate of Texas' population in 1910 of 3,861,893 is manifest, for that estimate gives an increase between 1900 and 1910 exactly equal to the increase between 1890 and 1900. Inspection of the table reveals the fact that, excepting Florida, every Southern State is

given, on the basis of a provisional estimate, the same increase in population between 1900 and 1910 as between 1890 and 1900. The Census report dealing with this matter, which bears upon mortality statistics, states expressly that the estimates for 1910 are only provisional, and adds:

The Thirteenth Census will be taken as of April 15, 1910, and just as soon thereafter as possible the actual census population for 1910 should in every instance be substituted for the estimated figures. The latter will only need to be used as a basis for monthly rates for the early months of 1910.

The report suggests that with the increasing lapse of time since the preceding actual count of population, the presumption of the accuracy of estimates becomes less and less warranted, and it adds:

An essential factor in the comparative study of vital statistics is the number and character of the population. Accurate knowledge of this kind can be obtained only by a census. For intercensal and post-censal years estimates must be employed, or else the use of vital rates must be entirely dispensed with, no effort being made to compare the number of births or deaths with the size of the population in which they have occurred. Of the two manners of treatment the latter is probably the more objectionable, and hence estimated populations have been used in the successive annual reports on mortality statistics since the census year 1900.

That is a reasonable proposition as far as it goes. But when one considers the system of estimating the increase of population, the basing of it upon the average annual increase between the two most recent censuses, except in certain areas in which the growth of population has been subject to marked deviation from the normal, as is explained by the Census Bureau, one may begin to understand the provisional developments of the census as to Southern population, and to question whether mortality statistics and, indeed, any national statistics grounded upon the figures of population, are of any value to the country except those based upon the decennial census, when an attempt is made to count the actual population, and, consequently, whether the permanent census is of any value at all.

Certainly the method employed by the Census Bureau in estimating population is hardly one of common-sense statistics. Analyzing the provisional estimates in the light of the explanation as to areas in which the growth of population has been subject to marked deviation from the normal, one finds difficulty in understanding why Florida should have been selected as the only Southern State in which there has been such a marked deviation during the past ten years; why the increase in Massachusetts appears less in the last decade than in the preceding one, and why it is greater in New York and Oregon, although the same in Illinois and California in the two decades. What system of statistics has been applied in these varying cases, and how would that system work out in the case of Nevada where the population was reduced by 5020 between 1890 and 1900? The Census, in the case of the provisional mortality statistics, throws no light upon the second half of that question. It omits Nevada altogether.

The main criticism, however, seems to lie against using the average annual increase as a basis of provisional estimates of population instead of the average annual rate of increase, a difference just as great as that between simple and compound interest, and the increase in population is normally at the compound rate.

If the computation of the census had been based upon the average annual

percentage of increase, much more scientific and reliable than "the usual census formula," though not absolutely perfect, the total population of the South, based upon the provisional estimates of the census, would be nearer 29,000,000 than 27,000,000, and nearer the figure that the actual count ought to show.

BUSINESS IN COURTESY.

In the main office of the Postal Telegraph-Cable Co. in Atlanta, and possibly in other offices of the company, a card printed in bold, striking type and hanging in a conspicuous place where every employe is compelled to see it, reads as follows:

True courtesy is no respecter of persons. It gives the civil word and the helping hand quite as readily to the ill-clad stranger as to the official of the company.

It is the wish of the management of this company that all its representatives whose work brings them into contact with the public may appreciate and fully measure up to their duty and privilege in this respect.

This card, or one similar to it, should be printed in the boldest type available and put in the most conspicuous place in every office of every corporation dealing with the public. It is bad enough to find a lack of courtesy anywhere, but when it is found in the offices of semi-public corporations it is doubly an evil, for it arouses a spirit of hostility that naturally seeks some outlet, even though it be blindly wielding a club in the dark, hoping to be able to smash some official head through legislation or otherwise.

An illustration of the opposite spirit was seen by the writer some time ago in a leading railroad depot in an important Southern town. The regulation of the railroad required that the ticket window should be open half an hour before the arrival of a train. A great crowd of travelers from Florida who had stopped over for a day or two were anxious to take that train. The depot was fairly well crowded with the aged and the infirm and semi-invalids, as well as the pleasure tourist, all anxious to get their tickets and have their baggage checked. The train was half an hour late, and though the ticket agent and some friend were having a hilariously good time back of the ticket window, he could not be induced by any tapping on the window to pay any heed to those outside, who were standing in line, some of whom had to wait nearly half an hour before the window was opened, and anxious to get their baggage checked and to see about accommodations on the Pullman. Finally the ticket agent came out of his office and crossed the room. He was politely asked to open the window that people might receive attention. His reply was that his regulations did not require him to open the window until half an hour before the arrival of the train, and as the train was half an hour late it would not be opened until the half-hour period required, and to this he insolently added that if that did not suit, "you may kick or report all you please."

This upstart youngster unfortunately has many imitators throughout the country. To them courtesy to the public is an unknown quantity. If the officers of railroads responsible for the employment of such people could know how much of this utter lack of courtesy is seen by thousands of travelers they would probably awaken to a realization of why the public never misses a chance to hit the railroad head, even though in doing so the hitter may himself be hurt.

The Postal Telegraph-Cable Co. is to be commended for making so conspicuous its suggestion of true courtesy, the

civil word and the helping hand. In our experience the Postal Company is one of the few great corporations where this spirit of courtesy and quick attention to business is found everywhere among all its employes. Its officers must have set to its employes a good example in courtesy. They must have proved themselves men of courtesy and of civil word and the helping hand, and they must have exercised very great skill in the selection of employes, or else the uniform courtesy found throughout the Postal Telegraph-Cable Co.'s service would not be so universal. Many other corporations have much to learn in this respect.

NORFOLK TRUCKING.

Norfolk harbor, a center of activity at all times of the year, presents a particularly busy scene at this season, the height of truck shipping. It is one of the advantages of the Norfolk section of Virginia that three or four crops a year can be grown there from the same soil. Consequently there is hardly a month in which shipments of truck are not made, beginning with kale and spinach in October and November, and including lettuce and radishes, strawberries, cabbage and potatoes, cucumbers, watermelons and citron, until the crops of peas and beans in September, October and November. A splendid exposition of this agricultural industry was made in a recent *Virginian-Pilot*, which estimates that more than \$8,000,000 came from the North last year to Norfolk in exchange for 7,200,000 quarts of strawberries and 4,000,000 crates and barrels of truck, including 700,000 barrels of spinach, 400,000 of kale, 150,000 of radishes, 500,000 of cabbages, 200,000 of cucumbers and 100,000 barrels of peas, 100,000 baskets of lettuce and 800,000 barrels of Irish potatoes. By rail and steamer most of this truck is shipped to Washington, Baltimore, Philadelphia, New York, Boston, Providence and other Eastern cities, and hardly any of the seven steamboat lines and eight railway lines operating from that section has not some share in the profitable traffic.

The beginning of this trucking industry is traced to 1844, when Richard Cox moved from New Jersey to Norfolk county and began to grow early vegetables for the Northern markets on a small scale. Though there was interruption by the war, the trucking area has extended east and south and west and across the bay to the Eastern Shore, and with the full reclamation of the Dismal Swamp will expand still more, increasing the importance of Norfolk as one of the chief providers of food for the nation.

AN ENGLISHMAN ON THE SOUTH.

Hon. Arthur Stanley of England, who is chairman of a London committee which controls the Louisiana Southern Railroad Company, and who was recently in New Orleans on business connected with the company, is quoted as follows:

The South is on the eve of a tremendous boom. I have seen the beginning of other big impetuses in the careers of countries, in Argentine, Canada and Egypt, but I have witnessed nothing to equal this present up-building which the South is facing. There are more chances for future development right here in this section of the South than I have noted anywhere else.

Mr. Stanley, who is a member of Parliament, is a son of the late Lord Derby, who was once Governor-General of Canada, and his older brother now

holds the title. As a representative of the committee, he says that considerable improvements will be made to the railroad, including an extension to Bohemia, La., about ten miles. The line is now 46 miles long. E. A. Hopkins of London is president.

BOYS, WHAT WILL YOU DO FOR YOUR SOUTH?

"Can you tell me of anyone who has a job for my boy?" is the question now being asked by many thousand fathers in the South whose sons are either home from college for the summer holidays or have left academic halls for good. The question was asked by a city man the other day, and he made the statement that his son, who will return to school in the fall, had just answered in person an advertisement of a business firm and had found 42 other applicants ahead of him. His question was answered with this question: What's the matter with "back to the farm?" The son was a husky-built lad standing about 5 feet 10, and about 18 or 19 years old, but with a paleness indicating the use of midnight oil over his books. The answer which is applicable, perhaps, to many young summer job-seekers may be elaborated.

For every one job in a city office there are, at this time of the year especially, about 100 applicants. For every 100 jobs on the farms there is about one applicant. If the boys who do not wish to be idle during the summer should turn their faces toward the country instead of expecting to be cooped up in town, there would be a better balance between the office and the farm as to needed help. It is the custom of some groups of college boys to migrate regularly at this season to the grain fields of the West and Northwest, where good wages are offered in harvesting work. The great mass of boys need not wander so far from home. Many of them can take a suburban car line to its terminus and within half a day's walk and application can, it is believed, find some farmer who would be glad to have even their unskilled help for a few weeks. There may be not much money in this proposition, if, indeed, the compensation be much more than board and lodging, but it is likely that in the majority of cases the worker will receive quite as much money as would be given him for his unskilled work in a town office. Farm work, to be sure, is hard, but it is healthful. If the young man cannot put in his summer holiday in the equally hard work of roughing it in camp life he may find no better relaxation and recreation from the mental work of the other months of the year than in the toll of the harvest field or the orchard, or around the barnyard. He must not be discouraged by the talk of country-bred boys whom he may have met in college and whose purpose in taking a college course is to train them for some career away from the farm. The latter have their recreation in books. Some of them are sadly mistaken in their aim. At any rate, two or three months in the open air at steady, productive work cannot do any healthy lad a particle of harm, and it may do him a world of good, not the least part of which may be the development of an inclination on his part to make his purpose in continuing in college the fitting of himself for a life career on the farm.

If the Southern boys who are looking for summer work in their native cities should get out into the nearby cotton fields, grain fields or vegetable tracts, what a relief it would be to many thousand anxious Southern agriculturists!

SOUTH, WHAT WILL YOU DO FOR YOUR BOYS?

Several thousand young Southerners have just stepped, diploma in hand, from the glare of the footlights of graduation night and are asking the South, What have you for us to do? Many of them, unfortunately, have their eyes upon the so-called learned professions in which muscular effort is hardly called for and mental effort has rewards for only the comparative few. Others, numbered by the hundreds, and they are the ones about whom the South should most concern itself, have a bent toward the productive professions in which learning, real learning, should count for as much as physique and practical experience, the professions in which young men work up through the merely mechanical grades to mill and furnace building or management, to railroad construction and administration, with its manifold ramifications for the exercise of creative energy, to mine operation, to agricultural engineering, to road building, to land reclamation, to all the occupations, in fact, in which natural aptitude is likely to be enhanced in value by acquaintance with fundamental principles instilled in a college course.

Instincts of these young men incline them to remain in the section where they were raised and where there is an increasing demand in many lines for the technically trained. Will they be practically encouraged to remain? That rests with the men of affairs, the capitalists and other leaders in material development. To keep their young men at home they must recognize two elemental facts. One is that the home-made boy is not, ipso facto, inferior to the imported one. Too many Southern men of today are inclined to jump from the old extreme of giving incompetents a chance because of the family connection or personal relations to the extreme of believing that because they have known a young man from childhood he cannot possibly have the making of competency in him. Too many Southern men are unwilling to acknowledge that males of the generation succeeding them are really grown-ups even at the age of 35 or 40. That mental failing points to the second fact, the unwillingness to pay the home-made boy a salary of a man, however mature he may be. The main attraction in other sections, where natural opportunities cannot compare with those of the South, is that salaries are usually gauged by a man's abilities to perform the task before him regardless of his years or his ancestry. In other sections, with rare exceptions of hysterical origin, the fact that a man's grandfather was once a candidate for governorship of the State cuts no ice in his selection as the manager of an industrial enterprise or as the executive in some great engineering undertaking. And he is paid on the basis of his skill at the job. Southern men of affairs must learn to pay better salaries.

Young men of the South must understand, on the other hand, that as beginners they cannot expect the salaries of men with years of experience behind them. They must not forget that in many cases they are really being paid a salary to perfect themselves for the tasks set by their employers.

A DUMP FOR ALIENS.

When an unusually large number of men of foreign birth were arraigned before him recently on charges of felony, Judge Edward Swann of the Court of Special Sessions, in New York city,

commented forcibly upon the practice of certain foreign Governments of dumping upon this country their criminals, paupers and undesirables. He said:

They come into our ports and are assisted here because it is cheaper for European Governments to pay their passage than to support them in prisons in the old country. Many of these prisoners should be deported, yet I am unable to do that. Many persons rush to Washington to oppose legislation that would enable the courts to send these men back. Yet these very persons complain that they are taxed too much and complain of public officials. I am informed that one Government gets its criminals to this country for \$6.25 a head, and when they get here we have to pay \$4.50 a month for their keep in Sing Sing or some other institution. The great majority of foreigners make good citizens and we have plenty of room for that kind, but for the criminals we have no use.

If Judge Swann could be induced to name foreign Governments or other alien organizations that are responsible for the dumping upon this country of criminals, paupers and other undesirables, and if he should name a few of the New York persons who rush to Washington to oppose legislation that will enable the courts to deport these undesirables, he would strengthen mightily the hands of individuals and organizations that are seeking to prevent the demand for desirable immigration to the South from being used in furtherance of the detrimental plan of relieving New York city of its congestion of undesirable and the cognate plan of lowering the requirements for immigration at the expense of the South, and for the immediate benefit of transatlantic steamship companies.

The South wants foreigners who will make good workers and good citizens. It is in favor of the immigration of such desirables. But it should oppose at every turn the efforts of selfishness or misdirected "philanthropy" to turn it into a dump for immigrants that foreign countries regard as undesirable, or whose main motive in coming to the United States is to escape ills in their native lands without intending to adapt themselves to American needs and American ideas. Desirable foreign immigration is that based upon individual ambition to seize productive opportunities in becoming American citizens, and not that moving in mass upon racial or religious lines.

THE NATION'S INTEREST IN A PANAMA CANAL EXPOSITION AT NEW ORLEANS.

The nation owes it to itself to do its utmost to develop the vast resources of the South, for the utilization of the South's latent wealth-creating possibilities will mightily enrich the whole country. This development would enrich the nation in material things. It would add vastly to the wealth of the whole country, for in the development of the South there would be created an ever-widening market for all the varied products of other sections. Here would be an almost limitless field for the investment of capital, the investment of brain power, and of energy and muscle. Here is a region with area and resources sufficient to support a population much greater than that of the United States today. It is a region capable of creating a wealth far greater than that of the entire country. Its development means the broadening of every line of material activity. It means expansion of trade in the North and West. It means the bringing of the whole country through Southern ports into closer touch with South

America, and through the Panama Canal with the Orient.

If this country were one vast corporation, the directors of which realized the illimitable possibilities for development possessed by the South to the enrichment of every stockholder, it would not be possible for us to conceive of any director being so narrow-minded as not to encourage the utmost development of the South. In effect, the United States is a great corporation, the stockholders of which are the people. The members of Congress are the directors, charged by the people with the trusteeship for the management of their property. Upon Congress rests the responsibility to do all in its power to develop the material interests of the country, and thus add to the prosperity of the whole property. But the development of the South means more than the material enrichment of the country. It means the broadening of American patriotism. It means the development of a region destined to be a mighty safeguard in the future against some of the destructive influences at work. It means the broadening of the knowledge of the South as to the rest of the country, and the rest of the country as to the South. Despite all that has been done, the North and West are still densely ignorant about the South. They still think of much of it as wholly an agricultural land. Much of it they regard as dangerous to health, and comparatively few persons in other sections of the country have any conception as to the climatic conditions in the South, not realizing that no other section of the United States has such climatic advantages as this.

In the near future the nation will celebrate the completion of the greatest undertaking ever carried out by man—the Panama Canal. This will be an event of world importance. It will mark one of the great epochs in human history. To this celebration the nations of the earth will come, for every nation on earth is vitally interested in the completion of the canal, and in all that the canal stands for in human affairs. That the exposition, which is to be held to celebrate this great event, should be held in the South is so plain that it ought not to be necessary to have to argue in its favor. The nation, as a nation, ought to recognize the logic of the situation. It ought to see the reasons why this exposition should be held in the South, and the pre-eminent advantages to accrue to the country from it—advantages which could not by any possible means come to the country if the exposition were held in any other section. The one place standing out before all others as the natural place for the exposition is New Orleans. Destined, as it is, to be one of the world's really great cities, typical of the commingling of people from all over the earth in the building of America, New Orleans is one of the most interesting cities in the country. It appeals to the imagination. It is a city of historic interest, a city accustomed to the handling of great crowds, a cosmopolitan place, a city to which the nations of the earth would more naturally prefer to go than to any other place in which a Panama Exposition could be held. No other city could possibly attract such attention from Central and South America—the countries with which we are striving to develop our commercial relations. No other city could so appeal to the great West, for, as James J. Hill is quoted as having said, "If you kick a barrel of flour

over in Minneapolis it will roll down hill to New Orleans." The whole trend of Western development, seeking an outlet to foreign markets, is through the Gulf ports, of which New Orleans is the leader. It means very much to the South that the exposition should be held in New Orleans. Its value to this section could not be well overestimated, and it behooves every man interested in the South—whether he be living in this section, whether he be a native of the South living elsewhere, or whether he be an investor in Southern railroads or Southern enterprises—to unite in a vigorous campaign to make certain that Congress will select New Orleans as the natural, the logical and the only proper place for the world's exposition to celebrate the opening of the Panama Canal.

SHORT SIGHT IN VIEWING THE COTTON SITUATION.

If Southern cotton growers and other men who recognize the intrinsic value of cotton under present conditions undertake to secure a fair price for cotton they are denounced as gamblers. But when the bears on the New York Cotton Exchange or elsewhere undertake to break down the price of cotton, bringing poverty to the grower, they are heralded as legitimate merchants.

Among the leaders of the world's cotton bears is Mr. C. W. Macara, chairman of the International Cotton Spinners' Association, who has again broken loose. It is a wonder that the International Cotton Spinners' Association does not either find a new president or else compel Mr. Macara to be a little more careful in the use of words, for he gives away the secrets of his associates to freely for their own good. Once more he is telling the inside secrets of those affiliated with the International Cotton Spinners' Association in their efforts to break down the price of cotton.

At a meeting in Brussels on June 8 of the Congress of the International Federation of Master Cotton Spinners and Manufacturers' Association, at which there were 400 delegates, representing all the principal European nations, India, Japan and the United States, Mr. Macara, attributing the rise in cotton to the speculators or gamblers, rather than to the legitimate causes, is quoted as saying:

This manipulation of the raw material could only be coped with successfully by an international combination of the users of cotton, and no sacrifice is too great to rid the trade of such a menace to its welfare.

In further discussion of the subject, Mr. Macara stated that a rise of $2\frac{1}{2}$ d. per pound in the average price of the American cotton crop represented an increase of \$500,000,000, and added:

Such an enhancement must necessarily lead to a serious curtailment in the consumption of cotton goods, which form the clothing of the poorest people all over the world.

And on the same subject he said:

So far the difficulties in the way of checking this scourge by legislation appear to be insurmountable, but the scourge could be removed by a combination among users of cotton.

Mr. Macara and those associated with him utterly disregard all conditions connected with cotton growing. They are striving with the same intensity with which European spinners have been striving for seventy-five years to break down the price of cotton. They have no concern for the impoverishment of cotton growers, provided they can secure cheap cotton for their own enrichment.

The South has been accustomed to a policy of this kind. It knows that the foreign spinner has for generations sought in every possible way to beat down the price of this great staple to the starvation point for the grower that the spinner might be enriched. But not many men have been as open and avowed in their fight as Mr. Macara, who, as president of the International Cotton Spinners' Association, refers to the increase in the price of cotton by manipulation, as he puts it, as a "scourge," and urges a combination of all cotton spinners throughout the world for the purpose of breaking down the price of cotton.

It will be remembered that some months ago the MANUFACTURERS' RECORD published extracts from statements made by Mr. Macara in which referring to the short-time movement inaugurated in Europe and this country through the work of the International Federation, said that it was for the purpose of enabling the cotton manufacturers to control the price of cotton. While the United States Government is seeking to question the right of those who have been struggling to hold up the price of cotton, would it not be equally appropriate for the Government to investigate the methods of the International Cotton Spinners' Association and its avowed purpose of forcing down the price of cotton in order that it may control the situation?

It has been the policy of many of the speculators in this country, especially of some in New York, to do all in their power to assist the spinners in this campaign—whether in combination with them or not is immaterial. Here is a great American industry—one of the greatest in the world—and upon it depends the prosperity of our foreign trade; for, Europe at present prices must pay to the South annually for the cotton it cannot secure elsewhere an amount greater than the annual gold production of the world. If any other country had such a marvelous monopoly given by nature its Government would do all in its power to benefit the industry and to enable the men by whose work its existence was made possible to secure the largest profits out of it. In its failure to do this the National Government, in effect, whether by intent or not, practically works in harmony with the spinners of the world, especially those of Europe, who are ever struggling for their own enrichment through the poverty of the cotton growers of the South.

At this Congress of the International Federation of Spinners one speaker admitted that there was a gradual decline in the cotton producing situation in Egypt, stating that the yield of the soil appeared to have gradually deteriorated to the extent of a diminution of about 22 per cent. in twelve years, but that there were still some prominent people in Egypt who are not pessimistic as to the future. A report of the British Cotton Growing Association expressed a hope similar to the hopes which had been expressed for more than half a century that within a short time there would be a large increase of cotton from British colonies, while a German speaker stated that £20,000 of public money would be expended by Germany on the promotion of cotton growing in German colonies. And on this point Mr. Macara seems again to have found it necessary to make a speech, bemoaning the high prices, and added that the duty was incumbent upon the cotton manufacturers to re-

double their efforts to encourage cotton-growing in all parts of the world.

Mr. J. W. Fox of Mississippi, who attended the meeting, in an address stated:

Should the consumption of cotton advance during the next 20 years at the same ratio as during the past 20, the demand for American cotton at the end of that period would be 25,000,000 bales.

He suggested that in order to make sure of the development of cotton-growing to the extent of producing a normal supply of cotton, the world must be willing to revise its ideas as to the price of cotton as it had done in regard to meat and wheat, and when in reply to a query he stated that this average price should be 15 cents a pound, it was reported that his statement was received with incredulity. No wonder it was received with incredulity, for Mr. Macara and his associates, some of them in this country unfortunately to their discredit, have been struggling for many years to convince the world that the South ought to keep on growing a large crop of cotton and sell it below the cost of production and steadily lessen its own possibility of profit merely to accommodate the spinners of Europe and some in this country who are associated with them in this campaign of bearing prices.

We are glad to know that there was one American in attendance upon the Congress prepared to make a statement to this great aggregation of bears that to insure a normal supply of cotton the world must adjust itself to the idea of paying 15 cents a pound. Mr. Fox, however, must have felt very lonely in such a gathering.

A YANKEE DREAM IN SOUTH AMERICA FULFILLED.

Few persons who read of the official opening on April 5 of the Transandine Railway, connecting Buenos Ayres and Santiago de Chile, probably comprehended the significance of the event. It will grow upon them, however, if they read an illuminating and exceedingly interesting article by Harriet Chalmers Adams in the May number of the *National Geographic Magazine*. This plan of rail connection across South America was suggested by William Wheelwright of Massachusetts 50 years ago, but because of the apparently insurmountable natural obstacles, the two Chilians, the brothers Clark, who later attempted to execute the plan, were held to be mere dreamers. One of them lived, however, to see the accomplishment. There were many engineering problems connected with it, the greatest, perhaps, being the piercing of the Andes on the Argentine-Chile border by a tunnel 10,358 feet long at an elevation of 10,468 feet above the sea. Before this tunnel was completed, travelers were obliged to take a labored journey across the mountains, making the journey from coast to coast a task of three and a half days' length. Before any of the railways was built it required 11 days for the dangerous sea voyage from Buenos Ayres to Santiago by way of the Strait of Magellan. The completion of the rail connection by way of the tunnel nearly two miles long and about the same distance above the sea reduces the time of the journey to 34 hours.

The author of the *National Geographic Magazine* article fully recognizes the economic importance to Chile and Argentina of this first east and west

railway across South America, and concludes as follows:

The first transcontinental railway of South America marks a new era in the continent's commercial history and in our own. With the opening of the Panama Canal we North Americans will have a golden opportunity to win from Germany and England the trade which is ours by the right of contiguity. Through gross lack of understanding of our Southern neighbors we have lagged behind in the commercial race. European nations have intelligently developed trade with Latin America, but it is only in recent years that we have followed in their wake. The Transandine Railway sounds the bugle call not alone of Argentine and Chilean development, but of the growth and prosperity of the entire continent. We owe better acquaintance to our Latin sisters. We owe commercial advancement to ourselves. Ships should carry our flag into Southern waters. We should take first rank in the near future in South American trade.

The dream of the Massachusetts Wheelwright in 1860 of the South American transcontinental railway has been fulfilled a few years ahead of the fulfillment of the earlier dream of the Virginian Maury, who had the hope of seeing the Central American Isthmus pierced before 1857. Lieutenant Maury, in one of the inspiring papers which he produced in his wonderful career, pointed out that from the Gulf of Mexico all the great commercial markets of the world are down-hill; he called the Gulf of Mexico and the Caribbean Sea the Mediterranean of the West to be developed by the isthmian connection; he sketched graphically the tremendous importance of the valleys of the Mississippi and the Amazon as contributors to the commerce of the Gulf, and said:

From all this we are led to the conclusion that the time is rapidly approaching, if it has not already arrived, when the Atlantic and Pacific must join hands across the Isthmus. We have shown that there is no sea in the world which is possessed of such importance as this Southern sea of ours; that with its succession of harvests there is from some one or other of its river basins a crop always on the way to market; that it has for back country a continent at the north and another at the south, and a world both to the east and the west. We have shown how it is contiguous to the two first and convenient to them all. The three great outlets of commerce, the delta of the Mississippi, the mouths of the Hudson and the Amazon, are all within 2000 miles, 10 days' sail, of Darien. It is a barrier that separates us from the markets of 600,000,000 people—three-fourths of the population of the earth. Break it down, therefore, and this country is placed midway between Europe and Asia; this sea becomes the center of the world and the focus of the world's commerce. This is a highway that will give vent to commerce, scope to energy and range to enterprise, which in a few years hence will make gay with steam and canvas parts of the ocean that are now unfrequented and almost unknown. Old channels of trade will be broken up and new ones opened. We desire to see our own country the standard-bearer in this great work.

In order that the Wheelwright dream and the Maury dream, in their fulfillments, may work out to the commercial benefit of the United States, in order that we may win our share of Latin-American trade in competition with Germany and England, we must apply to the task the intelligence that has brought such material results to European peoples in their South American dealings. We must have, first of all, our lines of swift steamers direct from our ports to those of South America. We must get away from the traditional policy of trying to compel other peoples to buy our surplus of goods that they do not want and must get to discovering what kind of goods other people need and to manufacturing them.

Potato growers who have made a success in the neighborhood of Hastings, Fla., are raising cotton in the summer as an alternate crop.

Significance of Oil Refining in Louisiana.

By DR. DAVID T. DAY of the United States Geological Survey.
[Written for the Manufacturers' Record.]

The daily press and technical journals are continually recording the establishment of new industrial plants in the Southern States. They are so many in number and cover such various lines of activity as to be bewildering to the average reader. They are often arranged alphabetically by States, and give no geographical grouping whatever. This is most convenient to the reader interested in some special locality, but is confusing as a record of general progress, for which these

only the initial step which was at all remarkable, the rest following as the inevitable course of demand and supply.

Conversely, it is the difficulty of this initial step which holds back much development. The investor finds himself handicapped in "starting something" by the lack of the accessories in that locality, while they exist already in plenty somewhere else. The new enterprise must be able to stand alone under the handicap of novel environment until the accessories

his product which he can develop. The nearest he can hope to get to new business is to supplant importation and eventually to extend his trade outside of the United States. No better instance of this state of competition can be cited than the condition in the Caddo natural gas field. First, as to natural advantages: Beyond doubt it is the particular spot of all the known earth where natural gas can be furnished in greatest amount, of the very best quality. There is comparatively little use for it, and therefore it can be sold at a profit at a lower price per cubic foot than anywhere else. Yet many millions of cubic feet per day are wasted into the open air—in spite of all efforts of the local

when made from natural gas, should be manufactured in the Caddo field of Louisiana, the product will decline in West Virginia; the gas will be piped eastward to Harrisburg, Pa., and elsewhere and sold for heating purposes, replacing coal, particularly anthracite.

Usually the readjustments of trade due to the entrance of a new source of supply are far more complicated, but the final adjustment is usually a net gain to the trade system, because it involves less expense for transportation. The end tendency is to factories near the source of supply, or splitting the distance between source of materials and the places of consumption.



SITE OF REFINERY DOCK AS IT WAS IN MAY, 1909.

individual items are never intended. They merely serve their purpose, as do the sporadic news items in the daily press, which chronicle, with the utmost promptness, each new investment of capital merely to show the trend of investment and to hint to those interested the localities where structural material and machinery will find new markets.

Little interest is paid to the ventures that die out, and if all these new enterprises could be remembered by the reader and he should add them up in his mind his impression of industrial growth would be startling, but very far from a conservative picture of the real situation.

The Industrial Game.

Only by periodic visits to all the sections

back it up. To do this requires one of two conditions: Either it must be backed by capitalists who have faith and can endure temporary loss, or there must be the advantage of phenomenal natural resources to give immediate local supremacy to the enterprise.

Here is a clear and definite exposition of the necessity for fair and impartial statements of the mineral and other resources of all sections of the country, which should be published by such a referee as the United States Government just as rapidly as the facts can be determined. The value of such impartial information is due not only to the successful development which may be based upon it, but to the failures which may be prevented where



CONSTRUCTION WORK IN PROGRESS, MAY, 1909. PRESIDENT M. F. WELLER IN LEFT FOREGROUND.

concerned can a clear view be had of the general development. Such a review of the Gulf States shows clearly that growth is taking place which is gratifyingly steady, but more than this, the growth in one line so stimulates or even compels growth in another that when the initiative is set by some one phenomenal feature the associated developments which naturally follow add up to a total so considerable as to become an "awakening" of this or that section. As a matter of fact, it was

the natural conditions are not best suited for the competition that must eventually determine the outcome.

It would be foolish not to recognize that industrial enterprises are growing more rapidly than population. The investor, as a general rule, finds the market for his products already well supplied, and he enters the game perfectly aware that the share which he can capture of the present consumption is a greater factor of his business than any additional demand for



FIRST TRAINLOAD OF IRON WORK ARRIVES JUNE 8, 1909. ON NOVEMBER 15, 1909, OIL WAS RUN FROM THE COMPLETED REFINERY.

conservation commission up to this time. It must be emphasized, however, that this zealous organization is using every effort to abate an unenviable reputation for waste, which has become well known, even in Europe.

Caddo's Possibilities.

There is scarcely an industry which can be started in this Caddo field which will not be obliged to win out over some present competitor or share business with him. For example, suppose the very crude and wasteful industry of making lampblack is inaugurated in the Caddo field. This would be much better and saner "conservation" than none at all, but the lampblack market is already perfectly

Reduced to the most fundamental expression, the real basis for the claims of the Southern States for at least a goodly share in many lines of manufacture is the fact that the sources of supply of raw materials and markets for a reasonable amount of the products are nearer together than the manufacturing localities with which the South must play the game of assembling and distribution.

It will be the purpose of this article, and others in the future, to show reasons for the growth already made in Southern industries, and to point out what appear to be legitimate lines for future development.

It may be profitable to glance for a moment at a recently established enterprise



STEEL RAILS NOW REST AMONG THE ROWS OF COTTON STALKS NEAR THE FOUNDATION OF THE HUGE STORAGE TANKS, WHERE COTTON GREW IN JUNE, 1909.

well supplied. It is a product of light weight that can stand considerable transportation, considering its price per pound. Its ultimate effect will be to conserve (to a microscopic extent) the coal of the Eastern States. Lampblack is not made from coal, but from the natural gas of West Virginia, by burning it with an insufficient supply of air. If this lampblack, or "carbon black," as it is called

at Baton Rouge, which is of the greatest consequence to Louisiana—the establishment of a well-equipped oil refinery by the Standard Oil Co. of Louisiana.

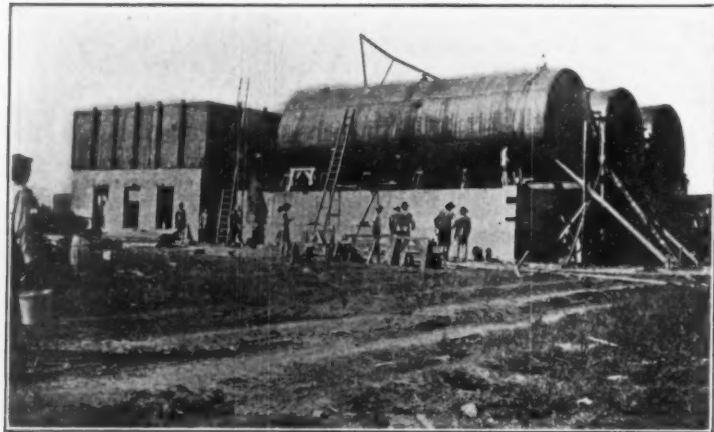
Oil Refinery at Baton Rouge.

It is safe to say that had this been an enterprise to be financed by sale of stock it would never have been undertaken. There is nothing which appeals to popular hysteria in the project. The region was

already fully supplied with every product made from petroleum, from gasoline to paraffine wax. There was absolutely no new market to be made. Even the sugar mills were receiving an adequate supply of fuel oil from the oil pools of Southwest Louisiana and Texas. Even the idea of profitable export trade would have aroused no enthusiasm from those knowing enough of the trade to think for a moment of the threatened competition from the "Maikop" oil field in Russia. Yet the proposition was sound and in line with the policy of sending oil by pipe line near to the sea, so that the products which have made the long journey by the cheapest process in a single pipe as crude oil can be spread out

mile north of the city. A year ago it was a cotton plantation. On April 29, 1909, ground was broken for the new plant. The first iron arrived on June 8, 1909, and on November 15 the first refined products were distilled. By those who know the city of tanks that must be erected, the maze of pipes to be laid, the stills, power plant, electric plant, repair shops, laboratory, acid factory, water supply and fire-protection system that must be provided, this must be recognized as the world's record, in so far as recorded, for building a refinery.

Although constructed so rapidly, this plant is a model for careful design and excellent construction.



INSTALLATION OF THE GREAT CRUDE-OIL STILL AND CONDENSERS BEGAN IN JULY, 1909.

in various refined forms by the next cheapest method of transportation—inland and ocean waterways.

If on this principle it is sound policy to go to the farthest limit with crude oil in a pipe line, why did not the Standard Oil Co. go all the way to New Orleans, where the leading local market is found? The answer is as simple as the question. Baton Rouge is the nearest high ground to the Gulf. In the course of centuries the Mississippi has spread out a vast flood plain in Southern Louisiana. It now winds along the eastern edge close to the bluffs of yellow clay and sand that mark the southwestern limit of the Tertiary in Louisiana, Mississippi, and away around Florida and up the Atlantic coast. The levee

Oil Refining.

The description of such a refinery is really an explanation of up-to-date petroleum refining processes.

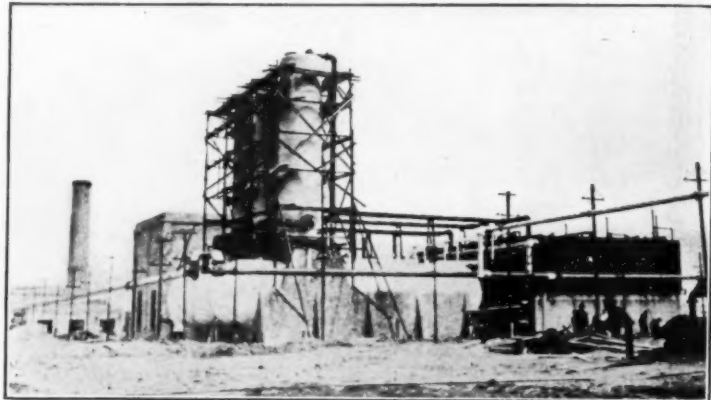
The crude oil was at first received from the Oklahoma field by tank cars pending the completion of the pipe line from Oklahoma to Baton Rouge, passing close to the Caddo oil field in Northwestern Louisiana. The oil is received into storage tanks of from 35,000 to 45,000 barrels each. Of these there are 20, with a total capacity of nearly 1,000,000 barrels. The problem of the refinery is to convert this crude oil into the most salable commercial products with the least possible waste, and to prevent the necessary waste from escaping into the air or into the water nearby, and

lubricating oil, and, as a last residual, fuel oil. It must be so equipped that the highest quality of the former products may be obtained, and that the character of the fuel oil and other heavy products may be varied at any time to supply the demands of special consumers. The process begins by distilling the crude oil so as to yield "crude naphtha" and "illuminating oil" distillate, leaving fuel oil behind in the still as the last product. This is all accomplished in 11 stills, into each of which from 500 to 1000 barrels of crude oil is pumped from the storage tanks.

The Methods.

Without going into the historical steps which have rapidly evolved the modern

gravity into a third still, where it is heated higher yet, and "gas oil" is driven off. This oil is too rank smelling to refine profitably, and is sold for enriching illuminating gas, as indicated by its name. This heating is continued for a longer or shorter time until the residue is suitable for sale as fuel oil. The fuel is transferred by pipes to its appropriate tanks, but an important problem is to cool it on the way, for it is so hot as to make it liable to take fire on exposure to the air. Formerly the oil was passed through a cold water condensing tank, but the amount of heat to be extracted is too great to be wasted. In the Baton Rouge plant the heat of the hot fuel oil is utilized by passing it in a coil of pipe through the crude oil to be heated,



STEAM STILL AND CONDENSERS WHERE CRUDE DISTILLATES ARE REDUCED TO "TEST."

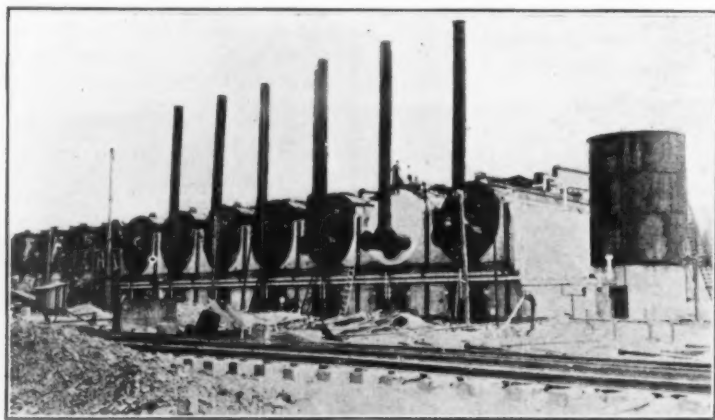
methods of oil distillation out of the more wasteful methods still referred to in technological works, suffice it to say that two systems are in use in most refineries, including that at Baton Rouge, and both are used all the time, the amount of oil refined by each process varying with the demands of trade.

Continuous Distillation.

The most interesting system is "continuous distillation." This requires a set of three stills, into the first of which is pumped the crude oil. This is heated by oil burners consuming the least salable fuel oil. The heat is so regulated that only the lighter vapors distill off and are condensed by passing through a long coil

so that the crude oil, instead of entering the first still cold, is "preheated" practically until it is already boiling when it goes into the still. The amount of heat required in the first still is thus materially reduced. A further fuel economy is effected by burning as part of the fuel under the stills the gas which is created when the gas oil is produced in "running down" the fuel oil to its proper consistency.

Thus far the crude oil has been divided into four products—"crude naphtha distillate," "crude burning oil distillate," "gas oil" ready for market, and "fuel oil," also ready to be distributed to consumers. There has been a small loss in the gas which escapes in finishing the fuel oil, but



CRUDE-OIL STILL IN FULL OPERATION IN APRIL, 1910. BECAUSE OF PERFECT COMBUSTION OF FUEL OIL THERE IS NO TRACE OF SMOKE.

on the east bank of the Mississippi ends at Baton Rouge, and is there replaced by these Tertiary bluffs, which are safely above any high water of the river and afford satisfactory foundations.

The Building Record.

The history of building this oil refinery is worthy of record. It is still less than a year since the construction began, and the refinery has been in operation for over six months. The refinery is located about a

to conduct all the various operations with as nearly no danger from fire as modern ingenuity and long experience can make possible. Of course, the final element of the problem is the distribution of the products with the greatest efficiency. That each one of these features involved much constructive skill in erecting the plant will be evident from the following description:

The Products.

The refinery converts the crude oil into gasoline, benzine, illuminating oil, gas oil,



POWER PLANT IN FULL OPERATION WITHOUT SMOKE.

of iron tubing immersed in a vat of flowing cold water, collected in the receiving house and allowed to flow to a receiving tank as "crude naphtha distillate." Relieved of its lighter portion, the hot oil flows to the next still, set slightly lower. This still is heated much more strongly, so that oil suitable for illuminating purposes passes off in vapor to be similarly cooled in a condenser tank, and it then flows to storage tanks as "crude burning oil distillate." Again, the less volatile residue remaining behind in the still flows continually by

this has burned most efficiently under the stills.

Now, the distillation of the "crude naphtha" must begin over again. It is pumped from its tank into "steam stills." These stills are equipped with a tall cylinder over each still, with many shelves inside. The crude naphtha runs down these cylinders into the stills, which are heated by steam coils running back and forth from one end to the other. There the lighter portions are volatilized and the vapor ascending through the cylinder

gives its heat to the descending crude naphtha and goes on to the condensers. The lightest vapors which come off first are crude gasoline, then "light benzine," and finally "heavy benzine." What is left in the still is really oil suitable for burning in lamps, but which was carried over with the naphtha in the first distillation. It is returned to "crude burning oil distillate."

The "crude burning oil distillate" is now treated in an exactly similar way by "steam stilling." Otherwise it would contain too much of light vapors for safe use in a lamp. This would be indicated by its gravity being too light, and especially by heating a few spoonfuls in a "flash cup"

much longer time. By this means the acid has been made to combine with the various impurities in the oil which give the bad color and odor. These settle off with the acid. The oil must next be washed most thoroughly with water, then with caustic soda to remove organic acids, such as naphthenic acids, which otherwise would remain dissolved in the oil. Again, the oil must be washed most thoroughly with water to remove the last traces of soaps formed by the action of the alkali on the oil, and which would encrust the wick. The oil must now go to settling tanks, in order that the water may settle off so thoroughly as to leave no trace of cloudiness in it. Should the oil not settle off

distilled off. These lubricating distillates require a larger proportion of sulphuric acid and are often filtered through fuller's earth to lighten the color and remove bad smelling impurities.

Power Plant.

It will be evident that in the steam-generating equipment for power to operate pumps, compressors and electric-light plants, as well as to furnish steam in large quantity for the steam stills in the power plant, as well as under the stills, the fuel is waste petroleum residues, which heat a large bank of boilers equipped with fuel economizers for heating the intake water by the hot gases from the grates.

The Oil Saver.

After its various uses the water, now frequently carrying traces of oil, is not allowed to pass the gates of the works to the adjoining swamp until it has gone through a huge cement oil trap, a series of basins where the oil remains on top and the water escapes near the bottom. Thus the Mississippi River on the other side of the swamp, while never very pure, is not defiled in the slightest by the refinery.

Not the least significant in the smooth running of this institution is the large office building and laboratory, a separate building for paying off the force each Sat-



LAYING THE LAST JOINT OF THE GREAT PIPE LINE FROM THE OKLAHOMA OIL FIELDS TO BATON ROUGE.

and noting the temperature at which it takes fire. This should be higher than any ordinary temperature, so that the oil will not give off dangerous vapor in a lamp, but it is also wise not to have the oil too high in its "flash," since it then burns too sluggishly in the lamp. When the oil has been "steamed to test" it runs out, heating the incoming oil by the way, and goes to the appropriate storage tank.

Refining.

It is not yet fit for burning purposes, for, while it is safe enough, it is straw-colored, and has a disagreeable odor. It must be refined. For this purpose the Baton Rouge refinery sends it to a far-

bright and clear, it is brightened by a "clay wash;" that is, a small amount of fuller's earth is added and agitated with the oil, after which the oil is ready for final inspection and delivery in tank cars, barrels or five-gallon cans to the consumers.

Practically this same process is repeated with gasoline and the "engine" naphtha and other grades of motor fluids.

Besides the oil as the main product, there remain the acid tar and the spent alkali from the refining process. A well-equipped special factory has been built and put in operation at Baton Rouge where this waste acid is separated by steam from the tar, and is then reconcen-



ARTESIAN WELL OF ALMOST CHEMICALLY PURE WATER FLOWING 1000 GALLONS PER MINUTE. TOTAL CAPACITY OF PLANT IS MORE THAN 10,000,000 GALLONS PER DAY.

away corner of the ground, where the agitators are located. These are high, lead-lined tanks, in which the oil receives a charge of from three to seven pounds of strong sulphuric acid per barrel of oil (66° Baume is the strength ordinarily used). As the acid is heavy and the oil light, they must be intimately mixed by blowing a strong current of air through. Thus the oil and acid are constantly and thoroughly mixed for about 20 minutes. Then the acid is allowed to settle off for a

trated by boiling it down in lead-lined vats heated by burning the waste tar. This acid and the similarly recovered alkali are used over again.

The demands of trade call for lubricating oils. These and other special oils call for the use of several crude oil stills, where the batching or discontinuous process is used. In such a still the crude is boiled down until first naphtha, burning oil, some gas oil, and, usually, heavier oils suitable for lubricating purposes have been



PLANT FOR CATCHING ALL WASTE OIL. ALL WASTE WATER GRAVITATES TO THESE CEMENT PLANTS, WHERE THE OIL COLLECTS AT THE TOP AND IS DRAWN OFF.

Water Supply.

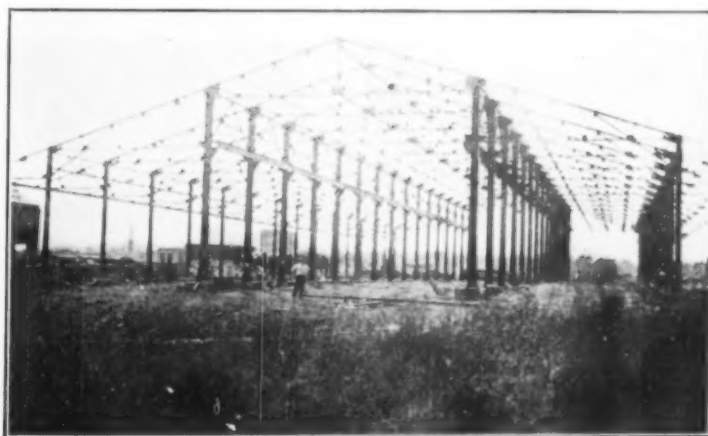
A feature of the greatest importance is an adequate supply of good water. By good fortune the conditions at Baton Rouge are almost ideal in this respect. Shortly before the advent of the oil refinery a large box factory nearby drilled for artesian water and obtained a large flow at about 1400 feet. Following this hint the oil company drilled 10 wells, and at less than 1000 feet obtained a copious supply of water. Most fortunately, this water proved almost chemically pure—a feature the value of which it is difficult to estimate.

urday, and nearby is the pride of President Weller, a well-equipped hospital tent, where the facilities even include a complete sterilizing outfit for operative surgery.

With all the machine-like precision of the work, no visitor can fail to enjoy the real Southern courtesy evinced by all, from President Weller and Secretary Gordon down to the only remaining member of the original plantation, the aged colored guardian of the front gate.

Distribution of Products.

Six railroads touch Baton Rouge, including the Illinois Central, the Hammond



PLANT FOR BUILDING AND REPAIRING TANK CARS. VIEWED WHILE UNDER CONSTRUCTION.

Fire Protection.

From these wells a high and a low-pressure system of pumps distribute the water everywhere and provide for a most perfect fire protection. Every tank is supplied with a perforated pipe around the top, which is connected with the high-service system. A sheet-iron deflector throws all the water from the perforated pipe directly against the tank, so that in case of fire in a neighboring plant the adjoining tanks are protected by being kept perfectly cool.

& Eastern, which affords connection with the New Orleans & Great Northern; the Louisiana Railway & Navigation Co., the Texas Pacific and the New Orleans, Texas & Mexico (Frisco) and the Southern Pacific is just completing its branch to West Baton Rouge.

Reference has been made in passing to the network of bayous and other inland passages, which, with the rivers, give access to almost any point in Southern Louisiana. The writer counted over 60 naph-

tha launches and lighters on Terre Bonne alone during a recent trip on that waterway. Further, the private canals for the drainage of swamp lands into various bayous also permit of cheap freight shipments to remote plantations. The distribution by waterways is made chiefly on barges in tanks, barrels and five-gallon cans. But a significant development within the past few weeks was the dispatching of the tank steamer A. F. Lucas from New York to Baton Rouge to load with crude oil. Local facilities for shipping crude oil made it possible to sell a cargo of crude in Port Arthur, Tex., at a profit, and no time was lost in executing the order. What this may mean for the future

Baton Rouge, has furnished many tons of gravel for concrete, which has the natural advantage of containing the sand and coarse material in the proper proportion for concrete. At present the traffic in sulphur and soda is inordinately great, for the sulphur is shipped from the Frasch mines, in Southwestern Louisiana, to be made into sulphuric acid at factories in the North, and the acid is hauled South again to Baton Rouge. Evidently conditions are ripe for a sulphuric-acid plant at Baton Rouge, and the same is true of the manufacture of soda, now also shipped in from distant points. A sulphuric-acid plant would be the only stimulus necessary to induce the cheap water shipment of

line at Orange, Tex., the development of paper from sawmill waste is a great start in the right direction, on the general prin-

ciple that every factory representing a new industry means 10 accessory factories in its wake.

Industrial Opportunity Knocks at Louisiana's Door.*

Now, just as the supply of fuel oil is declining, a great pipe line from other fields arrives right here in Baton Rouge, and the planter has fuel oil more plentiful still. In addition to this compensation for the lack of coal, there has also come for the northern part of the State a supply of natural gas sufficient for all needs, and, so far as known, the largest supply in the world. This fact points to the greatest responsibilities for its proper use. The one fact that the supply is so large shows that every use that has ever been made of natural gas in any field can be applied to it in Louisiana. The quality of the gas is also so good as to open every line of usefulness to it.

It is a fortunate thing that not only has experience taught the folly of wasting your store of natural gas, but great and successful enterprise has laid before you in an open book plentiful methods for confining gas, for transporting it safely and profitably. It has shown just what industries can make use of it, the methods which can be employed, and the conditions of cost necessary for profit to producer and consumer.

The practical question upon which I hope to throw some light is, "Under what conditions can manufacturing be stimulated in Louisiana?"

A manufacturer asks three questions in locating his plant. If the answers are sufficiently favorable he will not only locate, but he will tear down an existing plant and migrate to the favored spot. He asks:

1. Where can I find my raw materials at lowest price?
2. Where are distribution freight rates lowest?
3. Are the conditions sufficiently permanent for building up a profitable industry?

The one raw material common to all manufacturing is fuel. The manufacturer thinks of coal, water-power or natural gas.

As regards valuable coal mines, Louisiana has been left out. Significant evidences of this are the tanks on every plantation between here and Jennings, containing fuel oil for manufacturing sugar from cane. As soon as this fuel oil was discovered it was seized with avidity by the planter, for it increased his profit on sugar. Each dollar spent for oil meant dollars saved in labor at his boilers.

In Louisiana you have reached a stage where your first necessity is to stop the escape of gas from wild wells. Frequently this problem has presented difficulties in other fields which have been promptly pronounced insurmountable. In no field has this ever proved to be the case. Even in the early days, when methods must be invented upon the spot, as with the Karg well in Ohio, American ingenuity has always risen to the emergency and capped the well before its violence subsided. Later the Caney Fork well, near the Kansas line, offered difficulties that defied the gas men for six weeks, but they persisted and succeeded. This instance is worth a glance.

In 1906 this well began to spout over 50,000,000 feet of gas per day. It was struck by lightning and thus set on fire. A large bell was constructed and loaded on the sides with tons of steel ingots to weight it down. A derrick made of oil pipe swung this over the burning gas, but in spite of the steel weights it danced like a bubble in the current. Before they

could remedy this a change of the wind blew the flame toward their derrick and melted it down. In three days they were ready to try again. This time the hood was safely placed, but just then the well began to spout sand (in a final effort to resist control), and the gas increased to over 70,000,000 feet a day, the sand cut the hood to pieces. The next was successful, and by diverting the gas to one side through a 12-inch pipe the flame was extinguished and the well was capped. It is still capped, and holds its pressure. Mr. J. C. McDowell, who capped this well, writes that the two wild wells can be capped and shut in for from \$30,000 to \$40,000.

With these wells closed by the State as an evidence of willingness to develop and protect the gas industry, it remains to provide fair and equitable regulations between oil and gas men for either using or closing the other wells where the waste of gas is great. No great gas industry will be established until the State has done that much.

From this stage the success of further development depends upon finding sale for the gas at prices that will pay the producers. What is the lowest price at which an oil man can afford to let the gas man pipe away gas from his oil well? In West Virginia, where this problem is a serious one, the lowest price in recent years has been one-half cent per 1000 feet. Last year the lowest price had increased to one and three-quarters cents. Piped to Pittsburg, this gas has increased to 27 cents for families and 10 cents for factories. In Kansas factories secure gas for from two to four cents for manufacturing purposes. But the chambers of commerce also frequently arrange the further inducement of free factory sites and exemption from taxes. Well can they afford to do so, for \$60,000,000 worth of gas was used last year, and this meant in finished products over \$1,000,000,000, including \$500,000,000 to wage-earners in the gas regions. Of this, Caddo's gas waste could have furnished by proper utilization at least \$300,000,000 worth of products.

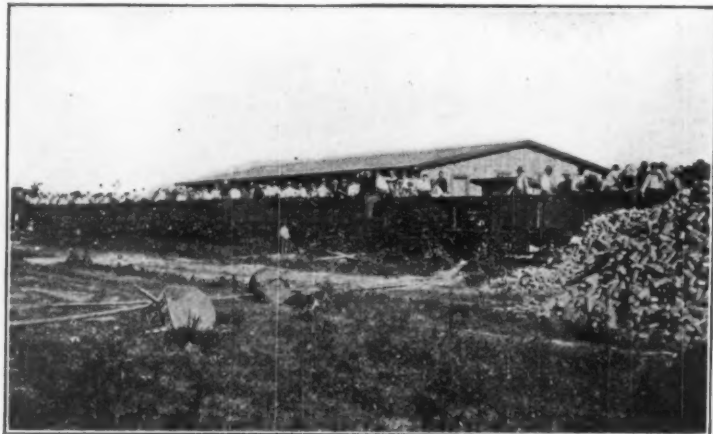
Now, what are the first and simplest uses for which this Caddo gas can be employed? Thirty thousand dollars invested in a lampblack plant pays a profit under present conditions of about \$30,000 a year, 100 per cent., with gas at three cents per thousand. Ten billion cubic feet were thus used in West Virginia at 2.4 cents a thousand feet.

In the Pittsburg region last year 19 iron and steel works used over \$2,000,000 worth of gas at 8 cents per thousand feet. In the same region 18 glass works used \$600,110 worth of gas at 9¼ cents per thousand.

In Kansas lead and zinc smelters used \$500,000 worth of gas at 3 cents per thousand. In 1906 it cost them 1.8 cents. Eighteen billion feet were used in Kansas alone for making brick and cement, at 3.2 cents a thousand.

As far as natural resources are concerned, these products could have been made in Shreveport, and with proper assurance of protection against waste they will be made there. But the chief inducements to industrial developments in Louisiana by natural gas are the chemical industries. Salt, lime, sulphur, phosphate rock and cheap fuel can be assembled in Louisiana cheaper than anywhere else.

Zinc and lead can be brought from Arkansas, iron ores from Texas, or even from nearby in your own State. From these



STARTING TO THE CITY AFTER PAYDAY.

cannot be guessed, but it would not be surprising if this demonstration of the trade advantages of Baton Rouge should be followed by keeping the Lucas engaged in the sale of wholesale lots of oil, both refined and crude, to domestic ports, and eventually to South American and European markets.

Within the last week word has gone out that the new pipe line from Oklahoma has actually begun to deliver its full service of 10,000 barrels per day to Baton Rouge. The importance of this pipe line as an additional outlet for the Oklahoma field is well understood, but its completion at this time is rendered particularly timely by the development of the James Bayou extension of the Caddo oil field, where from 10,000 to 15,000 barrels a day of

phosphate rock from the Gulf coast of Florida to Baton Rouge, or by rail from Tennessee to the same point or to Shreveport.

The oil refinery has given the original start to manufacturing at Baton Rouge. It has brought within the limits of ordinary enterprise the development of many industrial enterprises, each becoming easier because of the preceding one. To all of them the city offers an unusual feature in the way of a supply of phenomenally pure artesian water, a factor as gratifying as it was unexpected.

An "awakening" is beginning in Baton Rouge, but it is not the only one in Louisiana and close by in Texas. Northern capital has invaded the eastern edge of Louisiana, where C. W. Goodyear, a lum-



THE MEN WHO HOLD THE WORLD'S RECORD IN OIL-REFINERY CONSTRUCTION. READING FROM LEFT TO RIGHT, DAVIS, WELLER AND HAUTP.

light-gravity oil must be taken care of, and the prospect is for a much greater development there in the next few months.

For Louisiana this pipe line becomes a feature of traffic development on the Mississippi. It has already resulted in Baton Rouge becoming a subport of entry. The traffic in accessory materials has already assumed considerable proportions. Besides construction materials in steel, lumber and cement, Profit's Island, above

ber king of Buffalo, N. Y., has developed a whole town—Bogalusa—where one of the largest sawmills in the world furnishes the principal industry. But a fine resort hotel for summer and winter, fine schools, a Y. M. C. A. building, many stores, no saloons and a population above 5000 show what can be effected in only two years by shrewd and energetic investment of money. At the west side of the State, over the

*An address by Dr. David T. Day at Baton Rouge July 15.

simple materials come a vast array of useful products. Here are only the primary fundamental ones, each bringing other industries before its utilization is finished, before it is distributed to the consumers.

For many of these industries electricity is a useful form of power; for some it is essential. For this reason these chemical industries are centering at Niagara Falls, and anyone who notes the great development of water-power into electricity between Alabama and Washington comes almost to the conclusion that water-power is essential for the development of electricity, forgetting that electricity is simply the essential means of taking power from an isolated waterfall to the factory where the power is useful.

Only a month ago an expert engineer in Pittsburg published the result of his study as to how cheaply their high-priced natural gas could be converted into electricity, so that Pittsburg might compete in chemical industries with Niagara. He found that at present prices he could make electricity in large units at one-quarter cent per kilowatt—almost as cheaply as Niagara. In order to present this to you fairly I wired him, asking what price he used for natural

gas, and here is his reply: "I have used 15 cents a thousand for gas.—Crabtree."

Selling gas at three cents, you can produce, according to this expert, electricity at one-fourth the price at Niagara.

In closing let me call your attention to two bodies of men, one the Chemical Manufacturers of the United States, assembled at Pittsburg, where the paper referred to above was read to them. There are the men, trained to chemical work, and ready to apply your fuel to your salt and sulphur. Among them are the men who fought for and won the trade in American soda from the British importers. The other men, equally important, to whom I have referred, are your own honorable body. Of you the chemists ask stability for your fuel supply. Keep in your minds Niagara, with its eternal steady flow of power, and recognize that it is to you that your State, and, indeed, the nation, turns to give to its greatest supply of the most perfect fuel reasonable permanence by fairly regulating its use, and thus bring to your State at least \$300,000,000 in mineral products alone before you have ever touched cotton and other manufactured products of agriculture or the accessories which your manufacturing population will require.

To Drain 10,000 Square Miles of Florida Land

[Written for the Manufacturers' Record.]

To reclaim an empire of over 6,000,000 acres of rich land, an area larger than the land area of the whole State of Maryland, is the gigantic work which Florida let to contract last week.

The awarding of this contract for the drainage of the Everglades of Florida marks one of the most important undertakings in the history of that State, and one which will be far-reaching in the benefits to be derived. Occupying an area of 60x160 miles, this enormous swamp land has been a barrier to the development of the southern section of Florida, and lying between the east and west coasts, it has completely shut off these sections one from the other, rendering communication impossible except in a most roundabout way.

The successful bidder for this work was the Furst-Clark Construction Co. of Baltimore, Md., and Galveston, Tex., and the cost of the work provided in the contract will approximate \$2,500,000. Altogether five main canals, with an aggregate length of 238 miles, are to be built, these being: The North New River Canal, which will be 45 miles in length, from 50 to 65 feet in width, from 8.5 to 10 feet deep, excavation 4,774,375 cubic yards; the South New River Canal, 57 miles long, 50 to 70 feet wide, 10 to 13 feet deep, excavation 5,855,785 cubic yards; the Hillsboro River Canal, 50 miles long, 50 to 60 feet wide, 10 to 13 feet deep, excavation 6,101,310 cubic yards; the Miami Branch Canal, 22 miles long, 50 to 60 feet wide, 8 to 8.50 feet deep, excavation 2,282,026 cubic yards; Gulf Coast Canal, 60 miles long, 40 to 60 feet wide, 8.25 to 9 feet deep, excavation 5,052,430 cubic yards; total length 238 miles and total excavation 24,065,926 cubic yards. In this work it is estimated there will be 18,000,000 cubic yards of dirt and 6,000,000 cubic yards of rock to be removed, the contract price for the dirt being 8.4 cents per cubic yard and the rock 20.2 cents per cubic yard. The State, however, has reserved the right to withdraw the Gulf Coast Canal section from the contract. This was done in the event that the funds at the disposal of the State should not be sufficient to carry the work forward to its full completion. This does not, however, affect the price of the work to be done.

Some idea of the enormous size of these swamp lands can be had from the state-

ment that they are 60 miles wide and 160 miles long, or about 10,000 square miles, or 6,400,000 acres. They contain a very rich soil, practically black in color and from four to five feet deep, and from crops grown on portions that have so far been reclaimed as the result of the State's work, this land has been found to be extremely fertile and very productive, and especially suited to the growth of citrus fruits, sugar-cane and vegetables. Lake Okeechobee, covering approximately an area of 500,000 acres, lies in the northwestern part of the drainage district, and at times of heavy and continuous rains it overflows its banks and covers the land, keeping it in a constant swampy condition and rendering it impossible of cultivation. With the completion of the canals the overflow from this lake will be fully taken care of and the lands in the Everglades rendered available for cultivation. This work, however, is not all that will be necessary to fully develop the land, because some arrangements will have to be made to provide against the dry spells. This, it is felt, can be easily done by building dams at the lower end of the canals, thus keeping a certain amount of water in them. Lateral canals will also have to be constructed later, this work being undertaken by the individual property-owners.

As a result of awarding this contract the value of this land is expected to increase rapidly. Some of it now is bringing as high as \$20 an acre. The State itself owns quite a large area of it, and this will be sold later on.

All of the canals will radiate from Lake Okeechobee. Actual construction is to be started on July 1, and in the meantime the contractors will assemble at convenient points the equipment necessary to carry the work forward. The contracting company also agreed in its bid to purchase the big dredges that the State has been using in this work. In addition to these, however, a number of other dredges will be utilized, so that altogether the contractors intend to push the undertaking as rapidly as possible, and they predict that their contract will be fully completed somewhat ahead of the three-year limit placed upon it.

All of the work will be done under the Board of Drainage Commissioners of

Florida, which is composed of the Governor, Comptroller, the Attorney-General, Commissioner of Agriculture and the Treasurer, while the chief engineer, J. O. Wright, will have direct supervision of the entire undertaking. Mr. Wright was formerly in the reclamation service of the Government, and has had a wide experience in drainage and reclamation projects, and is especially fitted to supervise this big undertaking.

In drawing up the specifications for the work a map was made indicating the location of the several canals, but the board reserves the right to change these locations should a better and cheaper route be located.

Large sections of the Everglades have not yet been surveyed, consequently it was impossible to exactly locate the best route desired. The drainage engineer, however, will stake off the work all in advance of the contractor, and is to keep him informed regarding the surface of the ground, the depth of the muck, sand, clay and shells, and the thickness of the rock.

Mr. Frank Furst of the Furst-Clark Construction Co., in speaking of the undertaking, said: "This is one of the largest pieces of reclamation work ever undertaken, and the results accruing from it will be of far-reaching benefit to the State. It is almost hard to believe some of the statements made regarding the productivity of the soil of the Everglades and the increasing value of the land. I was told on good authority that one man received \$9000 for potatoes grown on 11 acres of this land, and sugar-cane raised on it has been pronounced of the very finest quality, while it is unexcelled for growing citrus fruits. One gentleman laid out 160,000 acres of this land into 10-acre farms and sold these for \$2000 each, receiving payment in \$20-a-month installments, while another man purchased 80,000 acres for \$40,000 and over night became rich from the rapidly-increasing values. Already a great many outsiders have been attracted here by the opportunities this reclamation work is offering, and the land is being sold with little difficulty and at increasing prices. Those taking up the lands are anxious to have the work progress as rapidly as possible, so that they can begin the active tilling of the soil.

"Few people realize the importance of this undertaking to Florida or the enormous extent of the work itself. These swamp lands are 60 miles wide, and extend for a length of 160 miles, and as for a great part they have not been penetrated by man, they form a complete barrier between those on the eastern coast and those on the western. To reach the west coast those on the east have to go up to the northern part of Florida and back again, making it a very long journey. With the completion of these canals this will be entirely overcome, and this section has every promise of being one of the richest and most valuable in the whole State.

"While our contract allows us three years in which to do the work, we fully expect, unless unforeseen circumstances arise, to finish within two years."

The task of draining the Everglades was first undertaken by the Board of Drainage Commissioners of Florida. This work has been going on for about two years, and altogether 30 or more miles of canals have been completed. Held back, however, by the lack of funds and suitable equipment for pushing the work rapidly, and owing to an insistent demand from owners of land in this territory, caused the board to realize that the work could be furthered to much greater advantage by giving it out to a large contractor. Through an agreement made with the various landholders it was arranged that a

tax of five cents an acre should be levied on about 4,000,000 acres of land. The law providing for this was passed in 1907, and under an agreement made with the landowners the tax accruing for five years was to be paid and advanced as needed to the Board of Drainage Commissioners. This made available the sum of \$1,000,000, which would be in addition to money received by the State for any of its holdings in the Everglades that it may sell.

In the great work that is now going on throughout the South looking to the reclamation of its 50,000,000 acres of wet lands, including that being done in Louisiana, Texas, North Carolina and other States, this is by far the largest single undertaking that has yet been put under a single contract. Covering about 10,000 square miles in area, it forms about one-quarter of the total area of the State. Investors, homeseekers and others are more and more appreciating the value of the wet lands in the South, and the very fact that not only can they be purchased at comparatively small rates, but also contain the richest kind of soil, which is most productive for a variety of crops, make them the more attractive.

When the MANUFACTURERS' RECORD a few months ago announced that a Chicago firm had arranged for the purchase and reclamation of 1,000,000 acres of wet land in Louisiana, wide attention was attracted to this as a vast undertaking. It did, indeed, seem to be a gigantic piece of work to reclaim 1,000,000 acres of land and make it available for settlement, but the difference of cost between buying and reclaiming such land and the value when reclaimed is so great that it is enough to tempt the most conservative people in the country to consider such propositions.

Vast, however, as are the reclamation undertakings in Louisiana of wet land, probably the richest known to mankind, Florida now comes to the front with a still more gigantic undertaking. In the contract made for the reclamation of the Everglades it is supposed to make available for cultivation over 6,000,000 acres, or an area considerably larger than the total area of the State of Maryland. It is a daring undertaking. Not daring in the sense of being venturesome, for what has been accomplished proves what can be done, but daring in the sense of the magnitude of the work and of the empire to be reclaimed.

It is gratifying to know that a concern as strong as that of the Furst-Clark Construction Co. of Baltimore secured the contract, and gratifying to know that it is a Southern concern in which Baltimore and Galveston men and money are linked together. This company, which is now digging the Cape Cod Canal, and which has for years been handling some of the largest dredging contracts of the National Government, has the financial ability and the engineering skill to practically guarantee that the work will be done vigorously and in the best possible manner. The State of Florida is to be congratulated that so strong a company, with such ample resources of men and money, has undertaken the work.

Sales of Steel Rails.

[Special Dispatch to Manufacturers' Record.]
New York, June 22.

The Illinois Steel Co. sold during the week 6000 tons; the Carnegie Company, 1200 tons, and the Tennessee Company, 900 tons.

The address of Mr. DeCourcy W. Thom, president of the Just Representation League of Maryland, at the second annual meeting of that organization, representing 85 associations, has been published in attractive pamphlet form.

A CHAIN OF FACTORIES.

Significance of Marshall Field & Co.'s Entrance Into the South.

[Special Dispatch to Manufacturers' Record.]
Chicago, June 21.

Marshall Field & Co., who wired the MANUFACTURERS' RECORD last week that they have purchased seven cotton mills at Spray, N. C., with a view to enlargement of operations, in reply to the inquiry of your correspondent say that the reorganization of these factories is as yet in such embryonic state that no definite information can be given as to the plans for enlarged operations. In connection with the increased activities in all manufacturing lines in the Spray territory Field & Co. say:

"Another important point in this connection is the elimination of the middlemen, as it means the merging of the manufacturer and distributor to meet the changing conditions in the marketing of merchandise. These mills are but a part of a chain of factories that are being developed by us. Our lace and lace-curtain plant at Zion City, which are the first lace mills constructed in this country, have been so successful that the equipment has been almost trebled by the importation of lace machinery during the current year. This lace plant is now making lace curtains, bed spreads, handkerchiefs and cotton tape. Our other factories in Chicago are making feather mattresses and comforters, and we have a handkerchief factory in Brooklyn. The Elston Worsted Mills at Providence, R. I., are making woollens and worsteds, while we have the under-muslin factory in New York, and wash dress goods factory in Chicago and ribbon factory in Paterson, N. J., and in addition to this we convert drapery fabrics, yarns, thread, knit underwear, wash goods, linings, domestic cottons and corsets. These facilities, plus a practically unlimited capital, form an aggregate of resources second to none anywhere for the distribution of dry goods direct from the manufacturer to the retailer."

The mention of these Northern factories by Field & Co. is simply to illustrate that the purchase of the Spray properties is in line with their well-defined policy of controlling a chain of factories manufacturing the goods for which they are distributors. The fact that this great house, controlling such unlimited capital, having facilities for the continual enlargement of its operations, has gone into the South on so large a scale as the purchase of the seven plants at Spray is but another indication of how the South is coming to be regarded by the West as well as by the East as the great center for future industrial development. JOHN GLASS.

To Handle Texas Iron Ores on a Large Scale.

Messrs. E. J. Lavino & Co. of Philadelphia, who are large handlers of iron ore and iron, in a letter to the MANUFACTURERS' RECORD in regard to the development of iron-ore properties in Texas, say:

"The steamship Luckenbach was chartered by the Texas Iron & Coal Co. to load 2500 tons of their ore at Texas to Philadelphia, but, owing to some labor difficulties that were started just as the ore was moving, only 600 tons were put on board this steamer. The ore comes to Philadelphia consigned to E. J. Lavino & Co., as agents for the Texas Iron & Coal Co. This latter company is the one that controls about 60,000 acres of ore lands in Cass and Marion counties, in the northeastern part of the State. Though there is an extensive acreage of these ore lands scattered in several counties, only a portion of them are so situated or contain ore that could be worked commercially under present conditions.

"The 60,000 acres controlled by the Texas Iron & Coal Co. are said to be the 'cream' of the whole formation, the ores being of very high grade, economical smelting and the lands within easy reach of several railroad lines.

"This shipment was simply an experiment in order to find out whether it would be possible to depend on local labor, and the result is that the company has decided to dispense with labor as much as possible in the future and to order necessary machinery, steam shovels, washing and digging plant, where the ores would be treated so as to bring them up to a test around 60 per cent. metallic iron.

"The company also found in their properties extensive deposits of carbonate of iron, testing from 43 to 46 per cent. before calcination. This carbonate, after being ignited, has tested 63 to 67 per cent. metallic iron.

"The officers of the Texas Iron & Coal Co. are as follows: President, E. J. Lavino of Philadelphia; vice-president, T. W. Griffiths of Dallas, Tex.; treasurer, J. B. Adoue of Dallas, Tex., president of the National Bank of Commerce of Dallas, Tex.; secretary, Cloyd H. Read of Dallas, Tex. Among the directors are C. A. Keating of Dallas, Tex.; Harry A. Williams of Hickman, Williams & Co., Chicago, Ill.; A. B. Wolvin of Duluth and Texas city; F. E. Johnston and A. G. Elliott, Jr., of Johnston, Elliott & Co., Dallas, Tex., to which shall be added two or three more directors from the East connected with large iron and steel interests.

"As soon as the plant will be erected important shipments of these ores will be made to Philadelphia, and also by rail to furnaces in the Middle States for mixing with the local ores from which those furnaces draw their supplies."

Fayette R. Plumb Works at St. Louis.

Some weeks ago the MANUFACTURERS' RECORD mentioned that Fayette R. Plumb, Inc., Bridesburg, Philadelphia, had decided to build a large plant for manufacturing tools and cutlery at St. Louis. This week contract was awarded to John G. Brown of Philadelphia to erect the plant buildings, including 16 structures on a site of 13 acres. Fourteen buildings will be one story high, mostly 100x60 feet; two will be two stories high; the total floor space of all the buildings will be 78,000 square feet. The construction will be of brick, concrete columns, slag roof, steel trusses, pivoted glass windows six feet high at top of all walls, etc. Thirteen buildings will be used for manufacturing, one for office and laboratory, one for power-house and machine shop and one for employees' use, having steel lockers and modern toilet facilities. It is understood that 400 skilled men will be employed when the plant begins operations, and the buildings are planned to admit of adding power and manufacturing units as needed. When the plant is in operation steel will be unloaded from the cars by cranes and work through the forge shop, grinding and tempering departments to the storage building, to be stamped with trade-marks. Then the tools will be polished and go to the handle-room, which will be a wing composed of three buildings, each separated by a fire wall, where the wood will be stored and made into handles. The wood and steel parts are then assembled and go to the finishing department, the stock department and the shipping-room. The Plumb company has been well known for many years as a tool manufacturer, and it is understood the St. Louis plant will distribute its product throughout the South, the West and the Southwest. It is reported \$1,000,000 will be the cost of the plant.

THE PORT ARTHUR ROUTE.

Industrial and Agricultural Developments Under Way.

W. C. B. Allen, geologist the Kansas City Southern Railway Co., Kansas City, Mo., writes to the MANUFACTURERS' RECORD:

"The industrial department of the Kansas City Southern Railway is much interested in the very complete and valuable record of progress found in the MANUFACTURERS' RECORD from the South, particularly in the States of Missouri, Arkansas, Oklahoma, Texas and Louisiana, through which States the Port Arthur route extends.

"A reconstruction of the roadbed, cutting down of grades and the shortening of this line is now in progress, costing from \$8,000,000 to \$10,000,000, in the general betterment and improvement of the main line. The industrial department has been organized for the purpose of developing the agricultural, timber and mineral lands and industrial resources of the country tributary to the Kansas City Southern Railway and its branches. Very extensive lumber manufacturing interests are represented by over 150 sawmills operating on the line, while some of the most important marble and slate fields, manganese and iron-ore deposits, antimony, asphalt, zinc, lead and copper-bearing veins, chalk, gypsum, marls, kaolin and pottery clays, brick shales and glass sands are located in immense deposits at various points between Joplin, Mo., and Shreveport, La. The new Caddo oil and gas fields of Northwestern Louisiana and the brown iron ores of Eastern Texas and Northwestern Louisiana are reached and are being developed at several points, and all these resources, while of very great industrial importance, are practically in their infancy.

"The opportunity for skilled labor, for capital, for scientific farmers, fruit growers and truck gardeners is good, and the cheap lands found in the valleys and on the plateaus of the Ozark, Boston and Ouachita Mountains offer homes and healthful surroundings for thousands who desire to better the conditions of themselves and families. Such lands range from \$5 upward, and generally include ample timber, water and grass for all purposes, with a mild climate and fruitful soil."

TAMPA DOCK FACILITIES.

Extensive Additions to Port Facilities Planned.

Mr. Eugene Holsinger, treasurer of the Swann & Holsinger Company of Tampa, Fla., writes to the MANUFACTURERS' RECORD:

"Col. A. R. Swann, the owner of valuable water frontage of more than 4000 feet in the city of Tampa, purposes building 1000 feet of modern docks, with warehouses, etc., on that portion of his property beginning at the Seaboard Air Line Railroad lift bridge across the ship channel, and being a continuation of the Handry & Knight terminals to the east. These docks will be for the accommodation of ocean-going vessels, and will be some 50 feet in width, built upon concrete piling and of the most modern and substantial character. A portion of the work will be of the 'saw-tooth' or lumber-dock variety, of which there is a pronounced deficiency at this time, and the remainder of the space named will be taken up for such terminals as may later be determined upon.

"The work will be begun at an early date, C. R. Knight, late engineer of the Atlantic Coast Line Railroad, being in charge of the proposed work, and the approximate cost will range between \$50,000 and \$60,000. Upon the completion of the

plans notice will be given and bids will be received by the engineer in charge.

"This work is along the proposed Government estuary project for the deepening of the harbor at this port, and for which Congress has voted an appropriation of \$1,750,000, and betokens the importance which Tampa is assuming as one of the leading Gulf ports and the fastest growing cities of the South."

CUBA'S TRADE QUESTIONS.

Three Vital Needs in the Development of the Republic.

Monseratte 2, A.,

Havana, Cuba, June 14.

Editor Manufacturers' Record:

The three vital questions to be solved by trade in this island at present are exploitation of virgin soil and mines, transportation and civil engineering contracts.

In the first case there is an incalculable source of profit and exploitation for a company to be established, and therefore for the manufacturers of that kind of machinery in the United States.

In the second case I can offer you more limited but also more definite information for a manufacturer or manufacturers of \$500 high wheel auto buggy, \$1000 four-cylinder touring cars, 20 horse-power; \$3000 auto street sprinklers, and \$2000 to \$3000 auto load trucks. Companies with ample capital to send to Cuba samples for demonstration of the first two kinds will sell in a year:

20 touring cars at \$1000.....	\$20,000
50 auto-buggies at \$500.....	25,000
10 sprinklers at \$3000.....	30,000
20 loadtrucks at \$3000.....	60,000
	\$135,000

Of course, in the matter of railroad material the quantity will be of great importance if an office is established in this city by the manufacturers to attend to the trade directly and especially.

As regards to civil engineering contracts, there will be work to be done for the approximate amount of \$5,896,900 during the next fiscal year.

AUGUSTO PIZARRO.

Natural Gas for Farmers.

More than 1000 miles of pipe line will be required to supply farmers in Webb, Demmitt, Duval, Lallie, Nexar, Uvalde and other West Texas counties with natural gas from the oil field in Red county, owned by the Producers' Oil Co. The pipe line will represent an investment of \$400,000, and is to supply gas for power to operate irrigating plants, mills, grinding machinery, etc., and to light the homes of farmers.

Secretary Walter Whatley of Crozet, secretary-treasurer of the Virginia State Horticultural Society, estimates that Albemarle county's crop of apples this year will be between 60,000 and 70,000 barrels, in addition to between 2000 and 2500 bushels in bulk, valued at between \$198,000 and \$210,000.

The Georgia Industrial Association elected last week Messrs. Charles D. Tuller of Atlanta, president; Fuller E. Callaway of Lagrange, vice-president, and H. L. Johnston of Palmetto, secretary-treasurer.

The Aspermont (Tex.) Commercial Club has been organized with S. W. Thomas, president; W. T. Mullin, secretary, and J. B. Lipscomb, treasurer.

The Commercial Club of Orange, Tex., has issued an attractive pamphlet dealing with the industries of Orange and the agricultural opportunities of Orange county.

Snyder, Tex., offers a site and will try to raise \$30,000 for an industrial school.

RAPID PROGRESS IN TEXAS CITY DEVELOPMENT

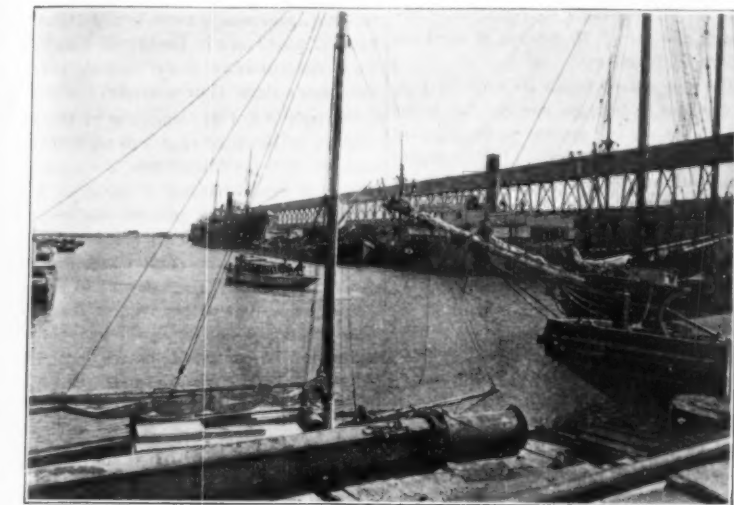
[Special Correspondence Manufacturers' Record.]

Texas City, Tex., June 16.

In line with the developments indicated in this correspondence some months ago, Texas City is constantly progressing in a manner to altogether justify predictions that here is to be built up a commercial port and industrial center of greatest importance. Visible evidences of the development loom up on the horizon from every direction, the five steel buildings now under construction presenting an imposing picture in the skyline looked at from either the shore or sea.

One of these buildings is the new con-

crete construction office building of the Texas City Transportation Co.; the others are a part of the warehouse system which is being established at Texas City, and which really constitutes the distinguishing advantage of Texas City as a seaport. There is a great amount of minor building construction in Texas City, 60 residences having been built here in 60 days past, and there is much inquiry by intending settlers and those interested in industrial projects as to conditions here. As an indication of the activities and present opportunities, it is interesting to note that a new industrial fuel and lumber company, established only two months ago, and as



HARBOR ACTIVITIES AT TEXAS CITY.

crete construction office building of the Texas City Transportation Co.; the others are a part of the warehouse system which is being established at Texas City, and which really constitutes the distinguishing advantage of Texas City as a seaport. There is a great amount of minor building construction in Texas City, 60 residences having been built here in 60 days past, and there is much inquiry by intending settlers and those interested in industrial projects as to conditions here. As an indication of the activities and present opportunities, it is interesting to note that a new industrial fuel and lumber company, established only two months ago, and as

here in the main only the general development of a city—nothing spectacular and no trace of a general "boom." As a matter of fact, the development of Texas City might be compared to the noiseless, undemonstrative and yet constant and irresistible movement of a glacier. The town has now about 2500 people, but in the town proper there is nothing to indicate the possible future greatness of this port outside of the completed oil refinery and the buildings of the Texas City Transportation Co., now under construction. The magnitude of these buildings impresses the

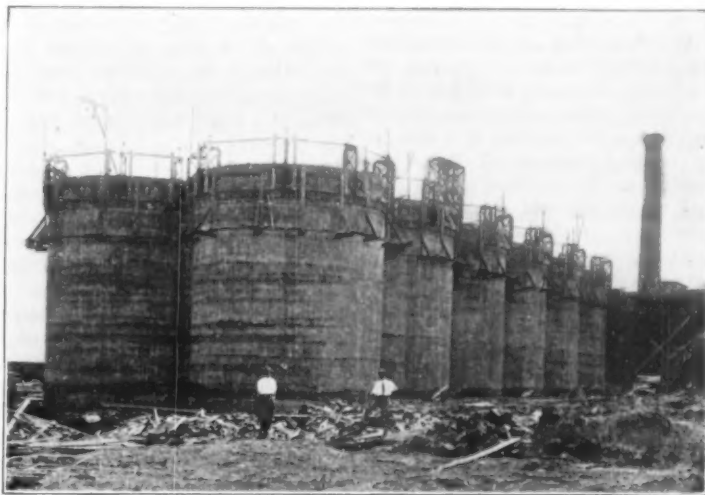
nished by the insurance people themselves.

With the machinery installed in these warehouses cotton can be piled in tiers eight bales high. In any other warehouse in the South, even if the insurance inspectors would permit such storing, the cost would be too great for the cotton to be handled to advantage in any other way than by the single tier system. In these Texas City warehouses, equipped with electric cranes, there is 22 feet clearance between the floor and the crane, so that eight tiers can be piled up with a force of only two men, one to handle the crane and one to stay on the floor and do the hooking and unhooking. These two men will do what would otherwise require the services of 12 men, and with the facilities

everything manufactured along the Atlantic seaboard and in the interior of the United States wherever manufactured products may advantageously be shipped to New York or Baltimore and from there transported by boat to Texas City.

The same proportionate reduction in transportation charges will be available for everything handled in and out of the new warehouses of the Texas City Transportation Co., and the revolutionary effects of inaugurating this system can hardly be approximately understood at the present time. The new sheds and service will be completed by the first of August.

Through the economies and revolutions already effected by the inauguration of the steamship service between New York and



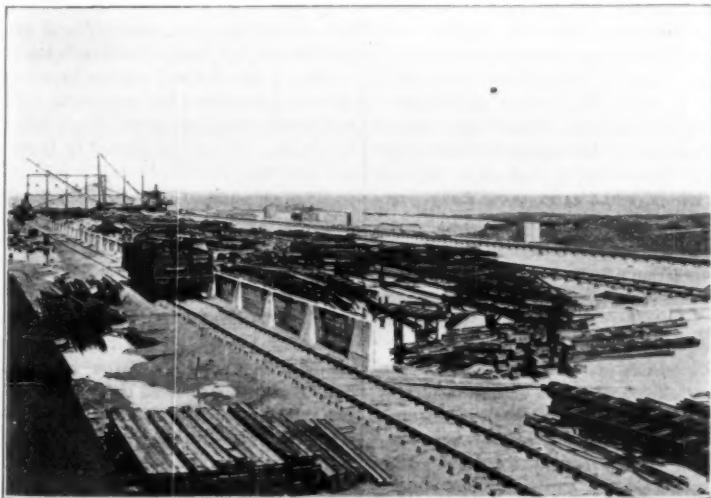
TEXAS CITY TRANSPORTATION CO.'S REINFORCED CONCRETE GRAIN-STORAGE BINS FOR ELEVATOR, UNDER CONSTRUCTION.

provided 20,000 bales can be stored in a warehouse 250x100 feet, whereas it would take a building 100x1600 feet under the old conditions, and require trucking, which would be prohibitive in the cost of the handling of the cotton. With the facilities provided here it is possible to handle the cotton in and out of the warehouse for a fraction over one cent per bale, against five to seven cents per bale elsewhere.

All of the warehouses under construction are equipped with electric cranes, which travel at the rate of 600 feet per minute and which may move in three directions at once, so the man in the cage

Texas City, and the transportation facilities provided here, a saving of a million dollars a month has been secured to the people of Texas on freight rates alone. The ultimate aggregate of savings to be effected through this enterprise of Capt. A. B. Wolvin is literally beyond computation.

Announcement has recently been made of plans by which the Davis Coal & Coke Co. is to distribute coal and coke from Texas City. Barges for this purpose are here now. The floating plant will be owned by the Davis Coal & Coke Co., but dock equipment, to cost \$100,000 and to



NEW WAREHOUSE ON MAIN PIER AT TEXAS CITY, 750 FEET LONG, 100 FEET WIDE AND 22 FEET INSIDE HEIGHT.

yet without permanent yards or shipping switches and tracks, has done such an extensive and profitable business as to show dividends which would amount to 100 per cent. a year on the original stock.

Much interest is being aroused in the possibilities of Texas City's development, but at the same time there is in evidence

Transportation Co. are so entirely fire-proof that merely nominal insurance rates have been guaranteed. There is not enough timber in any of these warehouses to make a bunch of toothpicks. In addition to this, a complete sprinkler system has been installed, and in every particular fire protection is provided under plans fur-



TEXAS CITY TRANSPORTATION CO.'S FOUR STEEL-FRAME REINFORCED CONCRETE CONCENTRATING WAREHOUSES, UNDER CONSTRUCTION.

could go from one extreme corner to another and lower the cage at the same time, so as to be ready for the work on the floor, in about a half-minute's time. These same facilities will effect an economy in the handling not only of cotton, but of everything shipped into and out of Texas City, and the saving in handling costs will apply to

be provided with electric cranes with buckets of five tons capacity and capable of handling a bucket every three-quarters of a minute, will be provided by the Texas City Transportation Co. The first cargo of coal will come out of Baltimore by the first of August. Smithing, gas and steam coal and coke will be handled. With the

floating equipment barges can go alongside any ship in the harbor so that the bunkers may be filled with coal either while the ship is loading or unloading. In this way ships will leave Texas City fully loaded with coal for a voyage to Liverpool or any part of the world. These facilities will reduce the cost of coal to steamships from 30 to 40 per cent. below the previous prices paid for the same coal. They will also make possible the development in an in this section of the South to secure an equal reduction in the cost of fuel. This will be to the immense advantage of all the cities in this section of the South, as it will make possible the development in an industrial way which the cost of fuel heretofore has been so largely against. In the transportation of this coal about one boat a week will be required out of Baltimore at the present time. It is foreseen that these developments will be largely to the advantage of Baltimore in building up the business of transporting products between that city and this section. It is believed that really a diversion of Baltimore's Southern business in canned products and other merchandise will result from the establishment of this steamship service from Baltimore to Texas City.

A number of industries are negotiating for a location in Texas City, and some of them seem to be assured. Three large-size concerns are referred to specifically as likely to have negotiations completed within a short time. However, at the present state of negotiations no mention of the individuals is deemed advisable. At the same time, it is significant of the progress of negotiations that the Texas City Transportation Co. is now installing additional electrical apparatus to provide for almost double the present capacity of the first plant. In the electrical power plant as constructed there are two generators of 250 kilowatts each, direct current. To take care of the new industries which have indicated a desire for a location here it has been found desirable to add a 300-kilowatt alternating-current generator, which is now being installed. It is expected that within 30 days announcement may be made as to the three new important plants now under negotiation.

Announcement has already been made of the location here of the Texas Sugar Refining Co. This enterprise is incorporated under the laws of Delaware with a capital of \$1,600,000, and its plant will occupy about 12 acres of the Texas City townsite. It is stated that machinery is now being manufactured for the plant, and that the construction of the refinery will be pushed as rapidly as possible, so that it may be in operation early in 1911. The initial capacity of the refinery will be 600 tons per day production. This refinery will handle sugars from Texas, Louisiana, Porto Rico, Mexico and other Central American countries. There are five steamship lines plying between Texas City and the sugar-producing countries of the South, all of which are now carrying provisions, merchandise, etc., out of this country, but are coming back with very light loads. By the importation of sugar to take care of this refinery there will be an adjustment of freight rates, so that not only will these ships give the lowest rates on sugar brought into any refinery in the United States, but will also be in position to reduce the rates on outbound cargoes; also there will be an increase in the number of ships. There are 1200 tons of sugar consumed per day in Texas at the present time, according to the figures given out, and the Texas City Sugar Refining Co. will be in position to practically monopolize the local trade for an indefinite period. It will be able to manufacture sugar cheaper than it can be made elsewhere, according to the figures of the promoters,

and, as it is understood that the men behind the enterprise are experts and altogether qualified, it seems like the sugar refinery is to be one of the most important enterprises recently located in the South.

One feature of the refinery situation which is dwelt on by the Texas City people is the fact that artesian water of the purest quality is so easily obtainable here. It is stated that 1,000,000 gallons of water a day is required to refine 600 tons of sugar. This, under ordinary circumstances, would entail a cost of about \$75,000 a year for water. At Texas City the refining company can simply sink its own artesian wells, and, as the water flows out with its own force without pumping, the water supply will be practically without cost. It is, of course, reasonable to assume that from time to time an increase in the capacity of this plant will be made. It is also reasonable to assume that candy factories, preserving plants, syrup manufacturing, etc., would follow in the wake of this refinery.

The Oil Refining Co., which is a conspicuous figure in the landscape, has been in operation for some months, and is in a very successful condition. It represents an investment of something like \$500,000. It has a capacity of about 2000 barrels a day, and is turning out various grades of oil and paraffine products. Largely on account of the operation of the oil refinery the little Texas City State Bank made a report on January 1 to the effect that deposits of the year amounted to \$18,000,000.

Texas City is busy now, but the most casual investigation indicates that it is merely in embryo compared to what will be seen here within the next two or three years, and that this development is but a part, although a very important part, of the developments which are taking place in every part of the Houston-Galveston district.

There is likely to be an iron-ore development down in this country. Just where it will occur, just to what extent, it is probably too early to say. It is significant that in addition to what may come from the interest taken by Mr. Charles M. Schwab and associates in the Texas iron-ore situation through Port Bolivar, independent demonstration is going on through this port. At the present time a cargo of ore from the Jefferson county field is being loaded at Texas City wharves on the steamship F. J. Luckenbach for shipment to Philadelphia. As a result of this shipment it is expected that it will be possible to determine whether it will be advantageous to ship this ore to Northern furnaces for blending or whether it would be more profitable to establish blast furnaces here. By either shipping the West Virginia and Maryland coal and coke or bringing coking coals here for coking purposes it might be possible to carry on blast furnace operations at Texas City. There is much interest in this subject right now, and a determination is manifest to arrive at a solution of the proposition. That there will be extensive iron production and industrial operations in iron manufacture in this section is believed to be inevitable by many who have given this subject most careful investigation. The vast possibilities of development which this would indicate it is impossible to definitely circumscribe.

ALBERT PHENIS.

A North Carolina Enterprise.

The Rockingham Railroad Co. has been chartered in North Carolina to build a line 24 miles long from Roberdell No. 1 via Rockingham to Gibson, N. C.; capital \$150,000 authorized and \$26,800 subscribed. The directors are J. P. Leak, W. C. Leak, M. L. Hinson, H. C. Dockery, W. L. Parsons and W. I. Everett.

FOR TENNESSEE'S PROGRESS.

Organization of the State Geological Survey.

The State Legislature at its last session provided for the establishment of a geological survey, to begin operations the first of the present month. The bill provided for a State Geological Commission, composed of the Governor, the State Commissioner of Agriculture, the Chief Mine Inspector, the president of the University of Tennessee, the chancellor of Vanderbilt University and the vice-chancellor of the University of the South. This commission has held several meetings, and on March 16 elected as State Geologist Mr. George H. Ashley, formerly of the United States Geological Survey, and as associate geologists Mr. L. C. Glenn of Vanderbilt University and Mr. C. H. Gordon of the University of Tennessee.

The new survey began its work May 1, as provided by law, the survey office being established for the present in the Capitol Annex Building, Nashville. Before beginning work regularly Mr. Ashley had made provisional arrangements for a large amount of co-operative work with several of the national bureaus, so as to nearly double the money to be spent on the geology of the State.

As the new survey is being deluged with requests for publications, it may be noted that in the few days since it began operations there has hardly been time to publish extensively. Indeed, little of importance need be looked for before the results of the coming field season have been worked up and printed. To meet immediate needs the survey plans to publish circulars of information, giving briefly a summary of the facts already known on the various resources of the State, and giving references to what has been published, and how it can be obtained. But the preparation of these circulars will require time.

The main publications of the survey will probably appear as bulletins to be issued as fast as work is completed. Among the things with which the new department will concern itself may be mentioned coal, oil, gas, ores, fertilizers, building stones, road-making materials, clays, cement materials, sands, soils, minerals and artesian waters, drainage of swamps, streams and water-powers, and other natural resources. Manifestly, with the funds at its command, it will be impossible for the survey to take up all of these matters at once, as, aside from certain preliminary studies, it is planned that all of the work done shall be as thorough as any similar work being done by either the national or the other State governments. Such work is slow and expensive, but experience has everywhere demonstrated that such thorough work repays the extra costs many times over.

The survey is anticipating the hearty co-operation of citizens of the State wherever its work is carried on. It would also appreciate any information bearing on its work—the discovery of new deposits and the extension of the area of known deposits of minerals or ores or any facts bearing on the subjects already enumerated. In its turn the survey stands ready to supply all the information it can along these same lines. While it cannot undertake to analyze specimens or to make assays of ores, it would gladly make such an examination of specimens as can be made without analysis or assay.

Again, in the prosecution of the field work much information of a confidential nature will be obtained. Such information will be held strictly confidential, and will not be made public, through publications or otherwise, except on the expressed permission of those supplying the information.

It is planned, by notices in the news-

papers, to keep the public informed of the results of work going on, or of any publications ready for distribution.

CHARLESTON IRON-MAKING.

Comment Upon the Suggestions Made by Mr. Charles Catlett.

Mr. Charles Catlett, the eminent geologist and engineer, of Staunton, Va., writes to the MANUFACTURERS' RECORD:

"As an addendum to the article in your last week's issue in regard to the possibilities of iron manufacture at Charleston, S. C., I submit a couple of coke analyses which are of much interest and which are furnished by the Clinchfield Coal Corporation, which is one of the affiliated companies of the Carolina, Clinchfield & Ohio Railway, and which owns nearly 300,000 acres of coal lands in Southwest Virginia. Their operations are so far confined to the Southern edge of their territory.

"Sample No. 1 is from close to the extension of the road that will be built to connect with the Chesapeake & Ohio, and is from a five-foot seam. Sample No. 2 is from a seam showing an eight-foot section which is being prospected many miles to the westward of the point where sample No. 1 was taken. The ash was so astonishingly low that at my request the coke was resampled and analyzed by another chemist, who confirmed the results. The coke is of good structure, and bright and hard:

	Sample 1.	Sample 2.
Moisture.....	.72	.93
Vol. Carb.....	.70	1.24
Fixed carbon.....	93.10	92.53
Ash.....	5.48	5.30
Sulphur.....	1.91	.81
Phosphorus.....	.019	.007

"Both samples are 72-hour coke, and were made from outcrop coal."

Commenting upon Mr. Catlett's suggestion, the *News and Courier* of Charleston says:

"The hint dropped by Mr. Catlett is one which the business men of Charleston should be prompt to seize. It is exactly in line with the view we have been urging repeatedly, that Charleston should not devote all of her energies or even the major part of them merely to building up a business of importing and exporting other people's products. If a town is to grow and expand, it must have manufacturing enterprises. Until recently Charleston has not possessed the facilities for creating industries of this kind, but as Mr. Catlett shows most convincingly, 'the industrial face of the country has been changed,' and with that change has come Charleston's opportunity. Two great coal sources have been opened up to us, and this is to be the great coal distributing port of the South Atlantic States. It has the chance to become far more than that, however, for coal will be obtainable here at prices which will give this city, good freight rates being available, advantages which will enable it to double its white population and quadruple its resources within a decade if it shall display the proper energy.

"Every business man in Charleston should ponder what Mr. Catlett has to say and should bear in mind that this is only one of many inviting fields of enterprise which are being opened up to this city. For many years vast heaps of pyrites cinders lined the banks of the Ashley River, neglected as worthless. Within the last two or three years their transformation into iron ore has been undertaken most successfully, and now it appears that they are likely to become a source of wealth to the community which on a smaller scale will make pyrites cinders to Charleston what cottonseed has already become to the South and what sawdust promises to become. We have many other opportunities which are lying waste. Shall we permit them to continue unproductive?"

The Need for Good Roads in the South.

By LAWRENCE C. WITTEN.

[Written for the Manufacturers' Record.]

The last half of the nineteenth century has been very fittingly termed "the dark age" of road building in the United States. The period of 1800 to 1850 marked the construction of some of the most splendid highways the country has known, and, although these turnpikes were built at a great cost, many of them were reduced to ruin by ill attention. Not only were the famous old pikes allowed to lapse into this shameful state during the last 50 years of the past century, but the construction of good roads was practically discontinued.

A few sentences from ex-President Roosevelt's speech at the National Good Roads Convention in Chicago in 1908 present a logical statement of the case. Mr. Roosevelt said: "When we wish to use descriptive terms fit to characterize great empires and the men who made those empires great, invariably one of the terms used is to signify that that empire built good roads. When we speak of the Romans, we speak of them as rulers, as conquerors, as administrators, as road builders. There are empires that rose over night and fell over night, empires whose influence was absolutely evanescent, which have passed away without leaving a trace of their former existence; but wherever the Roman established his rule the traces of that rule remain deep today, stamped on the language and customs of the people or stamped in the soil itself. And so, passing through Britain 15 centuries and over after the dominion of Rome passed away, the Roman roads as features still remain. Going through Italy, where power after power has risen and flourished and vanished since the days when the temporal dominion of the Roman emperors transferred its seat from Rome to Byzantium—going through Italy after the Lombard, the Goth, the Byzantine and all the people of the middle ages that have ruled that country—it is the imperishable Roman roads that reappear."

And when we review the past 50 years of the history of road building in this country, the excellent Roman highways should put us to shame.

Of the 2,150,000 miles of public roads in the United States, only about 8 per cent. are what may be termed good roads. Standing well up among the first rank of the nations of the world, the United States is far in the rear as a road builder. It is shown by the Government statistics that on the improved European roads the cost of hauling one ton one mile averages about 7½ cents, while in this country the cost of the transportation of one ton over our roads is more than 25 cents to the mile. Such a showing as this places the United States in the same rank with Mexico.

In his address before the first American Congress of Road Builders Governor Hay of Washington made the following noteworthy remarks: "It is estimated that the annual cost of transportation over the common roads of this country reaches the enormous sum of \$1,000,000,000. If, through proper construction, the cost of hauling over the roads in this country could be reduced to an equality with that in Europe, and a saving of two-thirds of a billion dollars annually might be effected, it is simple arithmetic to figure how much we can afford to expend in attaining this great economic saving."

In assigning the several causes for the retrogression of the United States as a road builder, Mr. J. E. Pennypacker, Jr., chief of road management of the Government office of good roads, states that the principal one was "the inauguration of

the era of railroad building," and further, as follows: "The impression was general that the railroad was the legitimate successor to the wagon road. A second cause, which discouraged to a certain extent the building of roads, was the abandonment by the National Government of the policy of building national roads. A third cause, operating more particularly in the South, was the Civil War. In the four years during which vast armies with their heavy equipments of artillery and supplies traversed practically every road in the South, almost the last vestige of the famous old turnpikes disappeared. Today there are in the United States 2,155,000 miles of public roads, thus disproving utterly the contention that the railroad would supplant the wagon road. Population, commerce and interdependence have reached such a point that the people must have a primary means of transportation, such as is afforded only by the public roads.

"Wealth has increased to such an extent that the building of improved roads is possible either with or without the aid of the National Government, and the country is recovering from the setback it received when the National Government went out of business as road builder.

"The devastating influences of the Civil War are so far removed that the South has regained and surpassed its old vitality and is now ready to rebuild its roads and far surpass its former achievements along material lines."

In an article on "Road Improvement in South Carolina" Hon. E. J. Watson, Commissioner of Agriculture, makes this interesting statement: "Good roads throughout South Carolina will save in freights to the cotton producers of the State alone \$450,000 annually."

The opinions of many other conservative experts and of prominent men interested in the good-roads movement could be cited in substantiation of the claim that the roads of the entire country, and of the South in particular, are in a deplorable condition. The best proof, however, can be gotten by a tour of inspection of our Southern roads.

That commerce, industry and agriculture in the South demand the improvement and construction of modern highways, passable in all seasons of the year, is a statement which cannot be intelligently and truthfully refuted.

The improvement of our public roads means just that increase in population which the fertile and, in some sections, thinly populated South needs. Good "trunk lines" will also add to the increased valuation of adjacent land, and the profits on all marketable products therefrom will be thereby increased. Every step in the development of rural districts results in an almost invaluable aid to the towns and cities.

When it is remembered that good roads are the producers of wealth in greater proportion than they consume wealth, it is very clear that good roads are needed from an economic standpoint, since we cannot longer dissipate what should be great commercial strength in an endeavor to market our products. Statistics show that the approximate cost of transporting a ton of freight per mile by water is one-tenth of one cent; by rail, one cent per mile; by good roads, seven cents; by ordinary roads, 25 cents, and by mud roads it costs the enormous figure of 60 cents per mile to transport a ton of freight. Which figure represents the cost of hauling over the majority of the roads throughout the South at all seasons of the year, 7, 25 or

60 cents? Yet the Virginia farmer complains of a freight rate of 60 cents per hundred from New York, when it costs him three cents to haul that hundred pounds one mile over some of the Virginia roads. And Virginia has, on the whole, equally as good, if not better, roads as any of the other Southern States.

Every year there are hauled over the country roads of the United States 200,000,000 tons of staple farm products, exclusive of fruit, poultry and other smaller products, which swell these figures to the great sum of 250,000,000 tons annually carried over the roads of the United States. In the transportation of so enormous an amount of tonnage the addition or subtraction of one cent per ton in the cost means a gain or loss to the American people of several million dollars. Since investigation proves that the cost of primary transportation can be reduced one-half to two-thirds of the present cost, it is not hard to realize what a great saving good roads will mean to the country. It is estimated by conservative experts, who have given the question years of study, that the average cost of hauling one ton 10 miles over the average country road in the South is \$3. It has been proven that the cost of transporting the same load the same distance over good roads would not be much more than \$1. If due allowance is made for exceptional cases, it is certain that the cost of moving a ton can be reduced one-half by putting the highways into good condition. It is, therefore, clear that the cost of improving the roads would be paid for in a short time by this saving of \$125,000,000 annually, as shown by the above figures.

Not only does the farmer, the merchant and the consumer in the South need good roads from an economic standpoint, but the social and educational conditions are loud in their demand for improved highways.

In emphasizing this the remarks of William Jennings Bryan are highly appropriate. Mr. Bryan recently said: "There are many reasons why this country should have good roads. Among them I may name, firstly, that we must have them in justice to the people who live in the country; secondly, as a matter of advantage to the people who live in the country, and thirdly, that the welfare of the nation demands that the comforts of country life shall, as far as possible, keep pace with the comforts of city life."

No man can become the well-rounded, broad-minded citizen every American should be if he is narrowed down to one course of living. Life in the country is naturally one of isolation to a great extent, even under the most favorable conditions. Bad roads, however, make the members of a farmer's household almost wholly dependent on their own society. Not only are they cut off from frequent intercourse with neighbors, but the pleasures and advantages of the towns and cities are often denied them also. Good roads will not only weld communities together and improve the social conditions therein, but the towns and railroads will become much easier of access, and, therefore, more frequently resorted to.

This great movement's important bearing on education can hardly be overestimated. Not only will the mere work of road improvement itself broaden the mind of the farmer boy and force upon him a realization of his country's rapid development, but the improved traveling facilities will put him easily in touch with many educational institutions and their feeders. The impassable condition of not a few country roads in winter deprives many children of even the meagre advantages of the district school, and cuts scores of them in every county off from attendance of the

town and city schools. Is this fair to the sturdy young American who, despite the almost insurmountable obstacles in his path, has in the past made himself known to commerce, education and science?

The plan of giving country children free transportation to the schools has, in many instances, been defeated by the deplorable conditions of the roads.

Hence the desire for highway improvement has become so firmly fixed in the minds of the Southern people that a mighty resolve for good roads has been almost simultaneously made. The enthusiasm, however, abates somewhat when we take up the consideration of the most feasible plan for the furtherance of this great move.

Material progress in laying the foundation has been made. Following the lead of nearly all of the Northern States, many of those south of Mason and Dixon's line already have an official in charge of highway improvement and construction, who bears the official title of "Commissioner of Highways." Other Southern States have a highway commission; some leave the work to the commissioner of agriculture, and some few put the State engineers in charge of the work, while the remainder have no organization for the work.

However, few well-defined and concerted plans seem to have been formulated, or at least put into operation throughout the South.

West Virginia, through the efforts of her able and energetic Commissioner of Public Roads, Hon. Chas. P. Light, will undoubtedly make rapid progress in the work of highway improvement, as her good laws on the subject give her an excellent basis.

Both in Virginia and in Georgia the State convicts are employed in the building of roads, and the reports of the supervising engineers indicate that convict labor in road construction is more effective than any other class of labor. Georgia has let out more than 4000 convicts to her counties for this work. In this connection the statements of Hon. E. J. Watson, South Carolina's Commissioner of Agriculture, Commerce and Industries, are very interesting. Commissioner Watson says: "Convicts are worked in gangs of 25, and they are housed in comfortable tents. The food bill is 12½ cents per day per man. This gives a substantial bill of fare, * * * accomplished by strict economy in management, and the men do not suffer for lack of sufficient food. The striped suits cost \$2 per suit, and each suit lasts from three to four months; the shoes cost \$1.50 per pair, and the underwear 75 cents per suit, each lasting about three months. Each squad of 25 convicts has one overseer, four guards and ten head of mules. * * * The real cost is in the feeding of the mules, this amounting to about \$16 per month per mule. * * * The total cost of construction of one mile of the best 30-foot wide sand-clay road, taking all the above items into consideration (i. e., tools, etc., in addition to cost above mentioned), is not over \$400 per mile as an average."

Convict labor is thus shown to be extremely economical, and since every condition—the climate, the labor supply and the nature of the convicts—is favorable to the use of road building in the South, there is no reason why it should not be steadily, consistently and effectively employed. When an individual wrongs society, then he should labor for the benefit of society as a recompense, and the criminal can be thus employed with but the slightest interference with the labor of the honest freeman. If he is used in the ranks of free labor he is brought into competition with the honest workingman to whom commerce means sustenance. Put the convict to work on the Southern roads, and this com-

petition is not only obviated, but the value of the skilled laborer will be increased.

The good-roads movement in Louisiana was augmented by Governor J. Y. Sanders, whose efforts in this direction have been untiring. With the assistance of Chief Engineer Kerr, Governor Sanders is making a successful campaign for highway improvement, and already has under construction what will undoubtedly be the famous pike from Baton Rouge to New Orleans.

Mississippi is enthusiastic, but it seems that no adequate laws for road improvement are on the statute-books, and it is to be feared that unless a good plan is at once adopted Mississippi's plans will be dissipated with but little result.

The same may be to some extent said of North Carolina, Alabama, Florida and other States. It is, therefore, clear that many of the Southern States must amend their present laws, or make new ones, before good roads will become a pleasing and profitable reality.

Since so many of the States in the North and West have been successful in the improvement of their highways, it is well to look at some of the laws which have been made before attempting to formulate a plan for securing good roads throughout the entire South.

The doctrine of State participation in highway building has been long recognized, and to more properly describe the several systems adopted by different States, these should be arranged as centralized, co-operative and local systems.

In the States having what has been termed the centralized system, all plans, specifications and estimates for road work are made by the State officials, who are also empowered to award contracts for construction and to inspect the actual construction and the completed work. The different States grouped under this system bear from 50 to 100 per cent. of the cost, New York adopting the former and California the latter plan.

Connecticut, Virginia and other States have plans which may be termed co-operative, since the duties and responsibilities fall almost wholly on local authorities.

In Delaware, Illinois, Michigan and several other States the local system prevails.

The New Hampshire law embraces many of the good features of the plans adopted under almost all of the several systems, and is an excellent law. State aid is granted in the greatest measure in the sections most in need of it, and least in the wealthier communities. It is also provided that State roads may be built entirely at the cost of the State. Towns having a valuation of less than \$2,000,000 are required to set aside \$1 on each \$1000 of their valuation, while those towns which have above this amount, and less than \$3,000,000 valuation, must set aside 75 cents per \$1000, and so on on a well-graduated scale.

The plan of apportioning the cost between the State and the local subdivisions was first adopted by New Jersey in 1891, and Massachusetts adopted State aid in 1892. In the latter the State pays the entire cost of construction, but the counties are required to refund one-half of the cost, with interest at 3 per cent., within six years after the road is completed. The annual appropriation by the State of Massachusetts for the five years beginning with 1903 was \$450,000. This amount was increased to \$500,000 beginning with 1908. The appropriations made annually do not, however, include the amounts appropriated for the support of the highway commissioner or for maintaining the State roads.

In Minnesota, which adopted State aid in 1905, the road and bridge fund is apportioned among the different counties ac-

cording to each county's area, the amount the county itself expends in road construction, and the expense incurred in the development of new territory. No county can get more than 3 per cent. nor less than one-half of 1 per cent. for any one year.

Up to and including 1905, under the Fuller-Plank Act, the appropriation for highways in New York amounted to \$1,407,835.27. In the same year a \$50,000,000 bond issue was authorized, by an amendment to the constitution, to pay the State's share of the cost of road construction. This amendment was put into effect by legislation in 1906. Since the money is expended under the Higbie-Armstrong law, the counties must also spend \$50,000,000, and a bond issue at the rate of \$5,000,000 per annum is thus required.

A further study of the laws of other Northern and Western States would be both interesting and instructive, but for the purpose of this article it is deemed that the investigation has proceeded as far as is necessary.

National aid has not been mentioned, but it is not believed that present conditions require it. By the proper effort the Southern States can, and it is believed and hoped will, independently of the aid of the Federal Government, build modern highways. About \$14,000,000 has been in the past appropriated by the Government, and today we see little evidence of its good.

Undoubtedly the Southern States can more easily and speedily improve their highways by the adoption of laws similar to that now in force in Massachusetts, and it is earnestly hoped that a law of this nature will in no great while be in force in every Southern State. The plan the writer suggests for the improvement and construction of highways in the South is, therefore, as follows: The State should pay the entire cost of construction, but the counties should be required to refund one-half of the cost, with interest at 3 per cent., within six years after the completion of any road for which the money is expended. Convict labor, as above shown, can be employed to greatly lessen the actual costs, and bonds can be issued to cover the expenditures, as it was shown has been done in New York.

The writer has endeavored to show the vital importance of good roads to the Southern States, and the enthusiasm which good-roads movements are encountering is indicative of the hearty support which will be given a definite and concerted move.

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Alvin, Tex.—City voted \$12,000 bond issue for street improvements.

Atlanta, Tex.—Cass County Precinct No. 7 voted \$40,000 bond issue for road improvements.

Ennis, Tex.—Ennis District of Ellis county voted issuance of \$225,000 of bonds for road improvements.

Evergreen, Ala.—Conecuh county voted \$100,000 bond issue for road improvements.

Lexington, Va.—City voted issuance of \$3000 for street and road improvements.

Pensacola, Fla.—City voted \$150,000 bond issue for street paving.

Port Lavaca, Tex.—City voted bond issue for sidewalk improvements.

Sour Lake, Tex.—Precinct No. 2 of Hardin county voted \$35,000 bond issue for road improvements.

Bonds to Be Voted.

Aransas Pass, Tex.—City will vote on \$15,000 bond issue for street paving.

Chatham, Va.—City contemplates voting in July on \$10,000 bond issue for macadamizing Main street, etc.

Duncan, Okla.—Stephens county will vote on issuing \$25,000 to \$35,000 of bonds for road improvements.

Havre de Grace, Md.—City contemplates issuing \$27,000 of bonds for street macadamizing, in addition to \$30,000 recently issued.

Contracts Awarded.

Baltimore, Md.—City awarded contract for macadamizing on 26th street.

Baltimore, Md.—Realty Securities Corporation awarded contract for sidewalk paving and for road grading.

Coleman, Tex.—City awarded contract for grading on principal streets, including concrete culverts at crossings and concrete ditches on each side of streets.

Dallas, Tex.—City awarded \$14,000 contract for bitulithic paving.

El Paso, Tex.—City awarded \$67,000 contract for bitulithic paving.

Hickory, N. C.—City awarded \$55,000 contract to construct streets and cement sidewalks.

Little Rock, Ark.—City awarded contract for resurfacing six blocks of Center street.

Maysville, Ky.—City awarded \$25,000 for paving.

St. Joseph, Mo.—City awarded contract for brick paving on Main street.

Contracts to Be Awarded.

Atlanta, Ga.—City will invite bids for paving on Marietta street.

Augusta, Ga.—City opened bids June 23 for 7000 square yards of vitrified-brick paving.

Baltimore, Md.—City opens bids June 29 for grading, curbing and paving on Laurens street with sheet asphalt, asphalt blocks, vitrified blocks or bitulithic.

Belair, Md.—Harford county opened bids June 20 for grading and macadamizing.

Boykins, Va.—City opens bids June 25 for constructing 2000 yards of granolithic sidewalks.

Chattanooga, Tenn.—Board of Public Works opened bids June 21 for improvements on six streets.

Coleman, Tex.—City awarded contract to pave, curb and gutter Commercial avenue; paving of crushed stone, concrete and gravel; concrete gutters.

Elizabeth City, N. C.—Street Improvement Committee receives bids until July 5 for paving streets.

Enid, Okla.—Board of Affairs invites bids for construction of East End road.

Fernandina, Fla.—City awarded contract to pave Center street.

Forrest City, Ark.—City contemplates paving five miles of concrete sidewalks.

Galveston, Tex.—Galveston county will construct sidewalk and curbing on seawall boulevard; requiring 4000 square yards sidewalk, 2200 linear feet concrete curbing and 2350 linear feet concrete retaining curb.

Greensboro, N. C.—City opened bids June 22 for laying concrete sidewalks.

Grenada, Miss.—City will pave streets; concrete curbing around public square.

Houston, Tex.—Magnolia Park Land Co. opens bids June 28 to grade, shell and drain boulevard in Magnolia Park.

Lexington, Ky.—Fayette County Turnpike Committee awarded contract at \$34,000 to resurface and reconstruct roads.

Little Rock, Ark.—City opens bids June 27 for paving 14th street.

Mansfield, La.—City contemplates constructing five to six miles of cement sidewalk.

Marlin, Tex.—City will award contract within 60 days to pave six blocks in business section.

Marlinton, W. Va.—Pocahontas county opened bids June 21 for constructing road 225 rods long.

Memphis, Tenn.—City will pave Cooper street with asphalt. City Engineer is preparing estimates for asphalt paving on Waldran Boulevard at a cost of probably \$25,000; asphalt or brick paving on East street, etc.; also considering \$25,000 paving improving on Central street, \$15,000 improvements on Lamar street, etc.

Oklahoma City, Okla.—City opens bids July 5 to pave with petrolithic, grade, etc., several streets.

Ripley, Tenn.—City contemplates laying concrete sidewalks in residence section.

Rotan, Tex.—City opens bids July 1 grading and graveling 26,756 square yards of streets.

South Pittsburg, Tenn.—City contemplates street improvements; will grade and macadamize road to Richard City and construct concrete arch across sewers on Cedar avenue.

Stillwater, Okla.—State Board of Agriculture opens bids June 27 for constructing 3500 feet of sidewalks five feet wide.

Stuttgart, Ark.—City will pave Main street.

Tupelo, Miss.—Lee county opens bids July 6 for constructing about 25 miles of road.

West Palm Beach, Fla.—Palm Beach county opens bids July 5 to grade and surface rock road.

West Palm Beach, Fla.—Palm Beach Farms Co. awarded contract to construct rock road from Boynton to company's property; distance five miles.

Texas Developments.

The Texas Commercial Secretaries' Association, with headquarters at Fort Worth, one of the business bodies of the South, which is accomplishing eminently practical results, notes that Dallas county has voted \$250,000 for road construction, Alvin \$12,000 for streets and Greenville \$100,000 for streets; that Houston will spend \$50,000 on cement sidewalks and Waco \$100,000 on streets, and that Precinct No. 1 of Bee county will vote in August on the question of \$100,000 of good-road bonds.

Turning to the South.

Sanderson & Porter, engineers and contractors, 52 William street, New York, and their associates, including James B. Colgate & Co. and some of the officials of the National City Bank of New York, have organized the Federal Light & Traction Co., the securities of which have, it is understood, all been placed. This company has secured a controlling interest in 11 electric-light and power and transit companies, including the Hobart Light & Power Co. of Oklahoma. Most of the other companies absorbed are in New Mexico, Colorado, Wyoming and Washington.

One of the interesting features of Southern development is the fact that engineers and contractors of such standing as Sanderson & Porter, and the financial people associated with them are, as indicated in the purchasing of an Oklahoma plant, beginning to turn their attention to the investment in and the development of enterprises in the South.

There is a very broad field in the South for the purchase and betterment, through the expenditure of new capital, of many enterprises offering exceptional opportunities to strong investors. Every time a new concern ranking as these people do turns to the South as a field for the expenditure of capital and technical skill, one more factor is added toward the hastening of the broadest development of the great resources of this section.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

BIG STREET-CAR WORK.

Houston Electric Extending and Otherwise Improving Its System.

The Houston Electric Co. of Houston, Tex., has been granted a 25-year franchise for an extension of two miles of the South End Line to the Rice Institute, including double-tracking. The line is to be completed within a year, and is to be operated to Bellaire, a townsite located on the Westmoreland Farms. This point will be reached over the line of the Westmoreland Railroad, about four miles long, which is now being completed, and it will make a route about seven miles long from the business center of Houston.

Work is to begin immediately on the Houston Electric extension from the intersection of Eagle and Fannin streets. The track will be laid with 70-pound rails, and it is estimated that the improvement will cost about \$75,000. At first the line will be single track. The Westmoreland Farms Line, which is a standard construction road, is laid with 60-pound rails and was built by W. W. Baldwin of Burlington, Iowa.

The Houston Electric Co. will, it is said, spend altogether this year \$800,000 in round figures for its improvement and extension work, instead of \$700,000, as previously reported. The improvements include the purchase of about 30 new cars, 500 tons of rail and other reconstruction, with more to follow. One of the large extensions is on the Arkansas Pass Line, which demands 2½ miles of additional track. All the work is under the charge of David Daly, manager.

STATE LINE & SOUTHERN.

Little Kanawha Syndicate Said to Be Prepared to Build Its Coal Road.

Major S. D. Brady, chief engineer of the Belington & Northern Railroad, Parkersburg, W. Va., and who is one of the incorporators of the recently chartered State Line & Southern Railroad Co. in West Virginia, is quoted in a report from Morgantown, W. Va., on the proposed line, as saying that the charter is owned by the Little Kanawha Syndicate, in which the Pittsburg & Lake Erie Railway, the Pennsylvania Railroad and the Baltimore & Ohio Railroad are interested; also that the final locations for the route between Rivesville, W. Va., and the Pennsylvania boundary, about 30 miles, are being made, and it is hoped that within 10 days or two weeks orders will be issued to award contracts. The money will be furnished for construction and the road will be owned by the syndicate, which was formed several years ago. The line will run along the western bank of the Monongahela River.

Major Brady is further quoted as saying that the formation of this new company will assist materially toward making the extension a possibility of the immediate future.

The line, as previously reported, will develop coal territory.

FAIRMONT & PITTSBURG.

Several Electric Lines to Be Merged for a System in Two States.

The Fairmont & Pittsburg Traction Co., recently chartered in West Virginia, will, according to a report from Morgantown, absorb four other lines to carry out its plan, which when fulfilled will connect Fairmont, Mannington, Morgantown and other points in West Virginia with Waynesburg and Pittsburg, Pa. The roads to be taken in include the Morgantown & Dunkard Valley, the Fairmont &

Mannington has been absorbed. Surveys of the Fairmont & Monongahela. The franchise of the latter is already reported purchased and the Fairmont & Mannington has been absorbed. Surveys are made and rights of way are being obtained. It is expected that more contracts will be let within a few weeks.

The officers of the Fairmont & Pittsburg Railway Co. are: President, W. M. Laws of Jersey City, N. J.; vice-president, Harry F. Smith; secretary, S. E. Miller; treasurer, J. R. Linn, all of Fairmont, W. Va., and J. Fred Beatty of Mannington, W. Va., is general manager.

New Equipment, Rails, Etc.

The order for 5700 tons of 80-pound steel rails given by the Stone & Webster Engineering Corporation for the Galveston-Houston Electric Railway to the Pennsylvania Steel Co. will be rolled at the Maryland Steel Co.'s plant, Sparrows Point, Md., shipments to begin July 11 and delivery to be completed by September 1.

The locomotives ordered by the Harriman lines from the Baldwin Works, Philadelphia, are: Eighteen 10-wheel, 10 8-wheel, 37 Pacific and 20 Atlantic; total 85. The Southern Pacific lines will get 20 of these locomotives. Delivery is to be made in October, November and December.

An officer of the Baltimore & Ohio Railroad denies a market report that 2500 more cars have been ordered. The only contract recently let was for 1000 steel underframe box cars, as previously noted.

The Charlotte Harbor & Northern Railroad, says a press report, has ordered 90 freight cars from the Barney & Smith Company, Dayton, O.

The Texas City Terminal Co. has received two large electric locomotives from the Westinghouse Company of Pittsburgh for use in the yards at Texas City, Tex.

D. A. Langhorne of Brent, Ky., is reported to have ordered a four-wheel saddle-tank switching locomotive from the American Locomotive Co., New York; weight, 36,000 pounds; driving wheels, 30 inches in diameter; cylinders, 10 inches in diameter by 16-inch stroke.

The Knoxville Railway & Light Co., Knoxville, Tenn., is preparing plans and specifications to purchase 10 new single-truck closed cars, but the order is not yet placed. The report that the company had already ordered some new cars is officially denied.

The Hawley lines, according to a market report, will order 6750 freight cars, thus: 5000 steel underframe box cars of 80,000 pounds capacity; 250 all-wood box cars of 60,000 pounds capacity; 250 all-wood stock cars of 80,000 pounds capacity; 250 steel underframe furniture cars, 60,000 pounds capacity, and 1000 all-steel gondola cars, 100,000 pounds capacity.

Street-Car Telephone Dispatching.

The installation of a system of telephones for the North Carolina Public Service Co. at Greensboro, N. C., is an interesting example of the usefulness of the telephone to a busy interurban electric railway. The lines perform the double task of dispatching street cars and providing convenience in transacting business among departments of the Public Service Company.

About a year ago this corporation came into control of the electric lighting, gas and railway properties in Greensboro. The present manager, E. C. Deal, is reported as saying that his chief problem was that of running cars on schedule time, and the telephone was thus called into service. A telephone central was established in the company's office, with a metallic circuit paralleling the car lines. A telephone in a box was placed on one of the poles at each switch along the route and at the

terminals. The telephones, together with the switchboard and the rest of the equipment, were furnished by the Western Electric Co.

Rules were adopted by which each conductor was to report at the end of the line on every trip. When any car was more than a minute late this was noted on a report form and submitted to the manager. After receiving his signature the notice of lateness was placed on a bulletin board in the trainmen's room, so that each could see the record of the other fellow. Previously it was found that when cars fell behind schedule the difficult matter was to fix the responsibility. The telephone system soon eliminated this.

Gulf & Magnolia Northern.

The Gulf & Magnolia Northern Railroad Co. will build a line from Junction City, Ark., to De Queen, Ark., 125 miles, as recently reported. The route is via Magnolia, Waldo, Bodeaw, Hope, Columbus, Mineral Springs and Lockesburg, and is through slightly rolling country. Connection will be made with the Rock Island system at Junction City, with the Louisiana & Northwestern at Magnolia, with the St. Louis Southwestern at Waldo, the St. Louis, Iron Mountain & Southern, the Frisco, and the Arkansas & Louisiana at Hope, the Memphis, Dallas & Gulf at Mineral Springs, the De Queen & Eastern at Lockesburg and the Kansas City Southern at De Queen. The company is not yet ready to ask for bids. The directors are: President, S. Q. Sevier, Hope, Ark.; vice-president, J. H. Betts, Hope, Ark.; treasurer, J. L. Davis, Magnolia, Ark.; secretary, P. A. Tharp, Hope, Ark.; W. Y. Foster, also of Hope; J. M. Witt, Henry Stevens of Magnolia, Ark.; Chas. Clark and C. A. Kennedy of Waldo, Ark. The chief engineer is Henry Nunun.

Union Station Contract Let.

The large railroad station proposed for Memphis, Tenn., by the Memphis Union Station Co. is now assured. Contract has just been let to the Murch Brothers Construction Co. of St. Louis for the erection of the building. The main structure will be three stories high, and will measure 100 x 300 feet; the express building, one story high, is 40x200 feet; the concourse, two stories high, is 75x240 feet. Steel construction, with hollow tile arches, will be used, with the outside of Bedford stone. The estimated cost of the building is \$600,000, and it will be erected under the supervision of W. H. Courtenay, chief engineer of the Louisville & Nashville Railroad at Louisville, Ky. The roads to use the station are the Louisville & Nashville, the Nashville, Chattanooga & St. Louis, the Southern Railway, the St. Louis Southwestern and the St. Louis, Iron Mountain & Southern.

Batesville Southwestern.

The Batesville Southwestern Railroad Co., which is to be chartered in Mississippi, is an Illinois Central project to build a line 15 miles long from Batesville to a point on the south bank of the Yocona River in Tallahatchie county. The route lies through level country, and bridging will be of pile trestles, with one truss at the crossing of the Yocona. The location surveys have just been started, and details are yet undetermined. Connection will be made with the Illinois Central at Batesville. A. S. Baldwin is chief engineer at Chicago, Ill.

Railroad Ferry at Baton Rouge.

The large railroad ferry-boat, John W. Garrett, once used by the Baltimore & Ohio Railroad to transfer trains over the harbor at Baltimore, and until last winter used by the Norfolk & Southern Railway

for transferring trains across Albemarle Sound, in North Carolina, has arrived at Baton Rouge, La., to be used by the Frisco system for transferring cars over the Mississippi River between Baton Rouge and Port Allen. The steamer has three tracks, and is able to carry 14 passenger cars and a locomotive or 25 freight cars at one time. The boat made the trip from Norfolk, Va., to Baton Rouge under her own steam. The Frisco, it is said, is building another boat of the same size at Dubuque, Iowa, and it may also be used in the South.

Will Rebuild and Extend.

A report from Tallapoosa, Ga., says that the Baker Construction Co., headed by H. F. Baker, has begun work on the rehabilitation of the Vanderbilt Timber, Mining & Southwestern Railway, a short line built several years ago. The right of way has been cleared and the old buildings have been fitted up. The chief engineer is reported as saying that the old grade will be reduced, some curves will be taken out and trestles will be rebuilt, but some of the trestles will be filled in. It is said to be the purpose of the contractor to put steam shovels on the work. This is the line which was recently reported purchased by Charles W. Eckert of Lancaster, Pa., and it is said that it may be extended via Hopewell, Ala., to Montgomery.

Gasoline-Electric Car Service.

The Southern Railway Co. announces that next month its steam passenger train service in the Greenville (S. C.) territory is to be supplemented by regular gas-electric motor-car service. To do this the railroad company has arranged with the General Electric Co. of Schenectady, N. Y., for the use of the gas-electric car that was run last summer experimentally between Manassas and Strasburg, Va. This car will be used in the Greenville district until the General Electric Co. completes two improved gas-electric cars for the Southern Railway and the McKen Motor Car Co. of Omaha completes a gasoline motor car, also for the Southern. These will be finished in a few months, and will be put in service as soon as delivered.

Scranton to Mobile.

Wm. D. Bullard of Scranton, Miss., confirms the report that he has been granted a franchise for an electric railway along the driveway lately completed in Jackson county to the Alabama boundary; also a similar franchise from Orange Grove to Moss Point, and from Moss Point to Pascagoula. As soon as the franchise covering the entire route is completed it is proposed to organize a company and build an electric railway connecting these points with Mobile, Ala., about 40 miles. The line will run through a well-populated section inhabited by progressive and thrifty people. The land is especially valuable for farming, truck growing, the raising of fruit and other garden products.

The New Bridge at Louisville.

W. M. Mitchell, general manager and chief engineer of the Kentucky & Indiana Bridge & Railroad Co., Louisville, Ky., is quoted as saying that construction of the proposed new bridge over the Ohio River at Louisville will be started within a month, and that the letting of contracts immediately has been authorized. The Louisville end of the bridge will be at 31st street. The structure will cost about \$2,000,000. It will have two tracks, and will accommodate the several railroads which now enter the city over the old single-track bridge that is immediately adjoining the point where the new bridge will cross. It is expected that two years will be necessary for the construction.

Change of Ownership.

A report from Wheeling, W. Va., says it has been officially announced that the controlling interest of John A. Howard in the City & Elm Grove Railway has been sold to Joseph Speidel, A. S. List, J. N. Vance, Dr. J. L. Dickey, L. E. Sands and H. S. Sands.

Following the deal the company was re-organized, and directors were elected as follows: Joseph Speidel, Sr., president; Hal Speidel, vice-president; A. S. List, treasurer; Alfred Caldwell, Harry S. Sands, Jesse W. Speidel and William G. Caldwell.

The company has about 30 miles of track in Wheeling and its suburbs.

Southern Pacific and Frisco.

The Frisco lines, according to a dispatch from Houston, Tex., have made a traffic agreement with the Southern Pacific lines by which the Frisco will send business to Dallas over the Houston & Texas Central and the "Sunset" will obtain a short route to St. Louis. This arrangement, it is said, practically amounts to an extension of the Frisco lines to Dallas, Houston and El Paso over the Southern Pacific, and the latter gains a desired connection with the Union Pacific at Kansas City.

Somerville to Taylor, Tex.

H. H. Fielder, president of the Houston, Somerville & Western Railway Co., writes that the proposed line has survey completed between Somerville and Taylor, Tex., 60 miles. Altogether the road will be 125 miles long, traversing a rich farming country, part of which contains valuable oak timber. It is desired to hear from contractors for the grading. Mr. Fielder's address is 427 Boulevard, Houston, Tex. M. R. Hoxie is vice-president, and L. J. Gould, engineer of construction, also at Houston.

New Officers Elected.

The Meridian (Miss.) Light & Railway Co., according to dispatches from that city, has been transferred to Henry L. Doherty & Co. of New York, who purchased the property, as lately rumored. Officers have been elected as follows: Henry L. Doherty, president; Russell Palmer, also of New York, first vice-president; A. B. Paterson of Meridian, second vice-president and general manager; Paul R. Jones, late of New York, secretary and treasurer; Carl B. Gilbert, assistant secretary and treasurer.

Railroad Notes.

An officer of the Frisco system denies the report that the company intends to build a line from Brady to Corpus Christi, Tex.

Contract has been awarded to J. J. Walsh & Son, 1533 Maryland avenue, Baltimore, Md., for building the passenger station of the Baltimore & Ohio Railroad at Grafton, W. Va.

Concerning the report that the Southern Railway proposes to make improvements between Memphis and Chattanooga, Tenn., an officer of the construction department says that he has had no advices concerning such work.

The Oklahoma Railway Co. of Oklahoma City, which is already operating over 50 miles of track, has about 30 miles under construction that will be ready for use in a short time. This company will build an addition of 3000 kilowatts to its power-house at a cost of about \$150,000. This work will be done by the company's forces, no contract being let. Anton H. Classen is president.

TEXTILES**The Turner Mills Co.**

In reference to recent reports that the Monbo Manufacturing Co. and the Turner Mills Co. had consolidated, C. L. Turner, general manager of the Turner Mills Co., writes as follows:

"The Turner Mills Co. and the Monbo Manufacturing Co., having united in building a concrete dam one-fourth mile long, thus physically uniting the two mills, it was deemed the proper thing to consolidate the two companies under the charter of the Turner Mills Co. The charter was suitably amended, and gives the privilege when necessary of increasing the capital stock to \$500,000. The officers are W. D. Turner, president; W. T. Kincaid, vice-president; C. L. Turner, treasurer and general manager; W. A. Colvert, secretary; J. L. Turner, late of Coolemeec Mills, N. C., superintendent. The directors are Samuel Turner, W. W. Turner, C. M. Steele, E. G. Gaither, T. F. Connor, J. B. Armfield, W. T. Kincaid, W. D. Turner and C. L. Turner.

"All the common stock of Turner Mills Co., \$150,000, had been paid in and invested in the East Monbo improvements, and the coming in of the Monbo Cotton Mills added \$90,000 to the capital of the Turner Mills Co. The capital stock paid in will be \$350,000 when all of the \$100,000 preferred is taken up.

"The new mill, 80x300 feet and two stories high above the massive concrete foundations, is now ready for the new machinery; the latter is arriving. There will be 10,240 spindles for yarns from 40 to 60, and the Monbo Cotton Mills has 4080 spindles in operation, this making 14,320 under the management of Turner Mills Co. There are also 1100 dry twister spindles and 3300 wet twister spindles. The developed horse-power in both mills is 587, and undeveloped about 400."

The Oklahoma Bag and Cotton Mills.

The Oklahoma Bag and Cotton Mills of Oklahoma City has been chartered with \$1,000,000 capital stock and will build a plant for spinning yarns, weaving bag cloth, manufacturing bags, and bleaching, finishing and printing the output. This company's buildings will include cotton mill two stories high, 79x450 feet; bag plant one story high, 75x300 feet; power-house one story high, 50x140 feet; 100 cottages for operatives, etc. There will also be constructed a 3,000,000-gallon water reservoir. All construction of concrete. The textile machinery will include about 10,000 spindles, 300 looms, etc., for manufacturing 12,000 to 14,000 yards of cloth daily, and the bleaching and printing equipments will have a capacity of 50,000 yards daily. This enterprise has been incorporated by M. L. Berry of Oklahoma City, John T. Woodside and W. L. Gassaway of Greenville, S. C.; R. G. Gaines of Central, S. C., and F. D. Ross of Lawton, Okla. Messrs. Woodside, Gaines and Gassaway are largely interested in cotton mills in their State, and M. L. Berry was formerly with the Mills Manufacturing Co. of Greenville. Mr. Berry will be president and general manager of the Oklahoma City company. It is understood the machinery contracts have been awarded, and that building construction will begin at once. In connection with this enterprise the Millwood Development Co. will develop 1600 acres of land for the mill village.

The Alta Vista Mill.

The Alta Vista (Va.) Cotton Mill Co. has awarded contracts for the machinery of its plant, reported last week. This will include about 13,000 spindles and 300 looms for manufacturing fine lawns, and electricity will be used for power. The

main building will be 300 feet long by 125 feet wide, and two stories high. It is understood the machinery contracts were as follows: Roving frames, Woonsocket (R. I.) Machine & Press Co.; spinning frames, Fales & Jenks Machine Co., Pawtucket, R. I.; spoolers, Easton & Burnham Machine Co., also of Pawtucket; slashers, Cohoes (N. Y.) Iron Foundry & Machine Co.; automatic looms, the Stafford Company, Readville, Mass.; clothroom machinery, Curtis & Marble Machine Co., Worcester, Mass.; boilers and engine of the Lentz type, Erie City Iron Co., Erie, Pa.; condensing apparatus, C. H. Wheeler Manufacturing Co., Philadelphia.

The Simpsonville Enlargement.

Referring to its recently announced enlargement, the Simpsonville (S. C.) Cotton Mill says: "Our capital stock has been increased from \$150,000 to \$500,000. An addition to the mill 132x290 feet, two stories, is now under construction, and additional machinery has been purchased which will increase the present equipment of 8192 spindles and 200 40-inch looms to 25,088 spindles and 600 40-inch looms. The present one-story building will be used exclusively as a weave shed.

"Two additional warehouses will be built, and we will also build about 50 cottages.

"J. E. Sirrine of Greenville, S. C., is our architect and engineer, and the Gallivan Building Co. of Greenville, S. C., has the contract to erect the mill and warehouses.

"We plan to run the entire mill by electricity."

The Cotton Movement.

In his report for June 17 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 290 days of the present season was 10,043,024 bales, a decrease under the same period last year of 3,208,728 bales. The exports, less 52,292 bales returned from abroad, were 5,697,025 bales, a decrease of 2,368,470 bales. The takings were, by Northern spinners, 1,942,771 bales, a decrease of 652,672 bales; by Southern spinners, 2,117,608 bales, a decrease of 105,587 bales.

Roberta Manufacturing Co.

The Roberta Manufacturing Co. of Concord, N. C., has been incorporated with a capital stock of \$100,000 by P. M. Keller of Concord, John C. Rankin and S. M. Robinson of Lowell, N. C., and R. E. Mason and J. H. McAden of Charlotte, N. C.

To Build Weaving Mill.

The Wylie Mills of Chester, S. C., will double present capital (\$150,000) and build an addition to be equipped with looms. This company is now operating 20,160 ring spindles.

The Manchester Cotton Mills.

The Manchester (Ga.) Cotton Mills will erect addition, as stated last week. There will be 108 new looms installed, and the company will also extend its cloth warehouse 50x100 feet. About \$40,000 is being expended.

The Calumet Addition.

The Calumet Manufacturing Co.'s recently reported addition will be two stories high, 87x104 feet, and contain 200 looms driven by steam. This plant has been operating 8200 ring spindles, and is located at Liberty, S. C.

Florence Manufacturing Co.

The Florence (S. C.) Manufacturing Co. has been chartered with a capital stock of \$200,000 by J. Willard Ragsdale, John L. Barringer and E. M. Matthews of Flor-

ence, Chas. A. Smith of Timmonsville, S. C., and others.

A \$300,000 Company.

John A. Hudgens of Pelzer, S. C., and associates of Williamston, S. C., will organize a \$300,000 company to build a cotton mill.

Textile Notes.

The Williamston (S. C.) Mills contemplate doubling its plant, now operating 32,256 spindles and 816 looms by steam and electricity.

The Norris Cotton Mills Co. of Catechee, S. C., is considering the installation of 234 automatic looms to replace plain looms. Last summer the company installed 218 automatic looms in the place of plain looms. The Norris mill was mentioned last week in this connection.

John W. Blackwelder of the Frederick (Okla.) Knitting Mill telegraphs the MANUFACTURERS' RECORD that he is not connected with the recently reported Clinton (Okla.) knitting-mill enterprise.

The W. A. Handley Manufacturing Co., Roanoke, Ala., has begun the erection of the addition reported last week, and it will be two stories high, equipped with 120 looms. The company has 20,000 spindles.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Will Manufacture Vehicle Wheels.

The Hollingsworth Wheel Co. of Hagerstown, Md., has incorporated with a capital stock of \$40,000 to manufacture vehicle wheels from the log. The company states that it will erect a three-story-and-basement factory building, 40x106 feet; brick wareroom, 60x106 feet, two stories and basement; boiler and engine-house, dryrooms, etc. It desires to purchase a full line of equipment, including sawmill machinery; two return-tubular boilers of 60 and 100 horse-power; two Corliss engines, 35 and 70 horse-power; wheel finishers, etc. Good second-hand or made-over machinery will be considered. Officers of the company are T. A. Brown, president and treasurer; B. E. Hollingsworth, vice-president; H. J. Hollingsworth, general manager, and C. A. Hollingsworth, secretary.

Norfolk Builders' Exchange.

At a meeting of the Builders' Exchange of Norfolk last week the following officers and directors were elected: Perry W. Ruth, president; W. T. Gregory, first vice-president; W. E. Ford, second vice-president; J. A. Turpin, third vice-president; M. A. Williams, treasurer; W. A. Burkard, E. H. Consolvo, Moran Barry, J. D. Anders, J. D. Alexander, E. Folliard, T. R. Callis, E. A. Odendhal, F. T. Clark, Percy Cake, R. M. Price and Thomas Laylor, directors.

Arkansas Lumber Dealers.

At a meeting of the Arkansas Association of Lumber Dealers at Little Rock last week the following officers were elected for the ensuing year: President, L. R. Putnam of Fayetteville; vice-president, J. E. Harris of Wynne; treasurer-secretary, H. F. Reiff of Little Rock.

Wants Carolina Timber Land.

The Jackson Lumber Co. of Sumter, S. C., advises the MANUFACTURERS' RECORD that the company wants a tract of North or South Carolina timber land to cut from 6,000,000 to 10,000,000 feet of lumber.

COTTONSEED**TO EXCLUDE ENGLISH OIL.****Amendment to the Rules of the New York Produce Exchange.**

At a meeting last week of the Cottonseed Products Trade of the New York Produce Exchange an amendment to the rules practically, it is said, excluding English cottonseed oil from delivery contracts was adopted, subject to ratification by the board of managers of the exchange. Referring to this matter, Mr. J. G. Gash of the American Cotton Oil Co. of New York writes to the MANUFACTURERS' RECORD:

"This was a very important matter to the Southern crude-oil mills, as the attempt to deliver English oil on an American contract would necessarily reduce the price of American oil.

"The duty was removed on imports of cotton oil on October 31 last, and this is the first time that an attempt has ever been made to deliver English oil on American contracts by manipulating it with American oil. On the day that English oil was tendered off-grade cottonseed oil dropped on the New York Produce Exchange over 120 points on the bid price, and the strange feature was shown of 6.50 bid for off oil, while 7.75 was bid for oil guaranteed of American make. The English oil is very much inferior to the American oil, but when bleached and mixed with American oil it could be used on a contract, and as English oil today is worth about one and one-half to two cents a pound less than American oil, you can see what an immense disadvantage it would make to the Southern mills."

Opposition to the amendment turned upon the contention that it would favor corners and manipulation in the event of a scarcity of American oil, and that the place of origin of a product should not be considered as long as the product is capable of standing on its merits. In favor of the amendment it was asserted that a vital principle of fair and honest trading was involved, in that the exchange should not countenance any form of contract that does not place both buyer and seller on equal terms, and, moreover, that the rules were adopted before English oil was thought of and the removal of the duty on cottonseed oil offered the menace of inferior composition. The rule, it was contended, contemplated only American oil, and it was argued that failure to pass the amendment would lead to two forms of contract, one in which American oil was guaranteed, as the buyer always has the right to change the form of contract before binding himself to a purchase.

Telegrams supporting the amendment came from the Texas Cottonseed Crushers' Association, the Alabama Crushers' Association, the Cottonseed Crushers' Association of Georgia, the Memphis Merchants' Exchange, the Interstate Cottonseed Crushers' Association, the Jacksonville Board of Trade, the Cleveland Commercial Club, the New Orleans Board of Trade, the Arkansas Cottonseed Crushers' Association and numerous individuals and firms.

The amendment reads as follows: "Unless otherwise specified at the time of the sale, all cottonseed products specified in and governed by the foregoing rules shall be of American origin and produced within the United States of America."

Oil Mill for Birmingham.

Announcement is made that the Farmers' Cotton Oil Co. of Birmingham will incorporate for the purpose of erecting and operating a cottonseed-oil mill in that city. Construction work, it is stated, will begin at once, and it is expected to have the plant ready for operation about October. It will involve an expenditure of approxi-

mately \$100,000, and will be accessible to the Birmingham Belt and the Louisville & Nashville railroads, the latter of which, it is said, will construct a track to the plant. It is understood that S. P. Brown of Albany, Ga., will be president of the company; P. G. Riley, Albany, vice-president, and T. J. Kidd of Birmingham, secretary-treasurer.

MINING**West Virginia Geological Survey.**

The West Virginia Geological Survey has just issued two new publications, viz., a new and revised edition of its coal, oil, gas and limestone map of West Virginia, and also a detailed county report, with accompanying case of topographic, geologic and soil maps covering the counties of Pleasants, Wood and Ritchie. These publications are of much interest not only to the citizens of the State generally, but especially so to those of the three counties named.

The coal, oil, gas and limestone map contains a thorough revision of the coal, oil and gas developments, the same being brought up to date as nearly as possible, and the new railway lines constructed since the last edition was published, August 31, 1908, have also been added. The names and postoffice addresses of all the coal companies operating in West Virginia up to the early part of 1910 are given on the map by counties, and the locations of the several mines are indicated by appropriate symbols and numbers. Price, enclosed in strong envelope and delivered by mail, 50 cents each.

The new detailed county report on Pleasants, Wood and Ritchie counties, with a case of topographic, geologic and soil maps, all assembled from the accurate topographic sheets of the U. S. G. Survey into single large maps embracing the entire area of the three counties. The text of this report, containing 352 pages +XIV, gives interesting descriptions of each county, its history, industries, mineral resources, soils, etc., as well as many detailed records of oil and gas borings.

The soils of the district have been studied, mapped and described by the experts of the Bureau of Soils of the United States Department of Agriculture, and the resulting report and maps of these three counties republished in the text of the county report. The topographic and geologic maps show all the roads, by-roads, houses, schoolhouses, churches, villages, streams, etc., and also the elevations above tide all over the areas of the three counties. The oil and gas pools developed up to 1909 are also shown by appropriate symbols. Price of volume and case of maps, postage or express prepaid, \$1.75.

Coal Briquettes and Eggettes.

Mr. J. S. Cottrell, secretary of the Bituminous Rock Products Co., Owensboro, Ky., writes to the MANUFACTURERS' RECORD:

"We are very anxious to be put in touch with parties making briquette and eggette coal from screenings. We want to go into this matter from the machinery end to the marketing of product, and would be glad to have figures submitted to us along lines of manufacturing and selling.

"We are in a cheap coal belt, and have a deposit of asphalt, and it has occurred to us we might be able to work off our tailings by making a briquette coal, establishing a plant here at Owensboro, which is right in the heart of the coal belt and 70 miles from deposit of asphalt."

Purchases Coal Rights.

With reference to recent reports that the Pittsburg Coal Co. of Baskett, Ky.,

has purchased coal lands at Spottsville, the MANUFACTURERS' RECORD is advised that the company has purchased the properties of the Green River Coal Co., consisting of more than 4000 acres of mineral rights, mine equipped with modern electrical machinery, miners' houses, commissary, tug with coal float and eight barges, and office and lot in Evansville. The coal lands adjoin the company's present holdings near Baskett, making one tract of 5200 acres of mineral rights, with 100 acres in fee-simple. The company's present output is 600 tons of coal per day, but it expects a production of 1000 tons per day by winter. It states that it is repairing barges, and is in need of barge lumber at once. Transportation facilities are accessible both by rail and water. Alexander Blair is the general superintendent of the company at Baskett.

Davy-Pocahontas Coal Co.

The Davy-Pocahontas Coal Co. of Welch, W. Va., has incorporated with a capital stock of \$500,000 to develop coal lands in McDowell county. Its incorporators are George E. Price, H. B. Smith, R. S. Spilman, R. M. Price and Buckner Clay, all of Charleston, W. Va. In connection with the enterprise the MANUFACTURERS' RECORD is advised that developments are not sufficiently advanced to announce details.

Helena Zinc & Mining Co.

Capitalists of Helena, Ark., have incorporated the Helena Zinc & Mining Co., with a capital stock of \$150,000, for the purpose of developing deposits in Marion county. Officers of the company are S. A. Woten, president; S. B. Straub, vice-president; D. T. Hargraves, treasurer, and J. Melenson, secretary.

To Manufacture Briquettes.

A report from Birmingham states that the Standard Fuel Co., Theodore Davis, president, is preparing plans for the erection of a plant to manufacture briquettes from soft-coal products. It will have a capacity of from 300 to 500 tons of briquettes, the product to be known as anthraccoal.

Balata Belting Made in America.

German and American interests have organized the Victor-Balata & Textile Belting Co., and will build a large plant in this country. The American interests are Charles E. Aaron and John R. Stein, president and treasurer, respectively, of the New York Leather Belting Co., New York, and the German interests are William Vollrath, Albert Vollrath and Edwin Vollrath of C. Vollrath & Son, Blankenburg, Germany. The officers of the new company are Charles E. Aaron, president; Edwin Vollrath, secretary, and John R. Stein, treasurer. The factory site will cover nine acres of land at Easton, Pa. The buildings and equipment will cost \$500,000. Two buildings will be erected immediately, including the main factory, 100x150 feet, and an impregnation building, 60x75 feet, both of these being of concrete and steel construction. Later on the company will build several other structures, including a plant for weaving cotton duck and one for making textile belts.

In connection with the plant a complete small village will be built for the workmen. The dwellings will be of concrete. The establishment of this plant is caused by the increasing demand for Balata belting. The process of manufacture is a secret one, and this policy will be maintained in the American plant. It is expected that the new factory will be in full operation by the latter part of October.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS' RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

A Letter from India.

P. C. Seth & Co., 62 Bendon street, Calcutta, India, write the MANUFACTURERS' RECORD:

"The effect of the Swadeshi movements in India was to inspire many for starting mills, manufactories, agricultural farms, etc. It was from the time of the Swadeshi movements that we were at all able to answer manufacturers of agricultural machinery and implements who were kind enough to allow us to represent their goods here. Small implements (spray pumps, garden syringes, plows, cultivators, garden hose, fencing, etc.) find retail purchasers by catalogues, circulars, etc. Are you interested in any of the Indian industrial seeds for commercial cultivation—shade and avenue trees, timber trees, fiber-yielding plants, medicinal herbs, plants, roots, plants yielding commercial products, barks, pods, etc., for dyeing and tanning, etc.? We are in direct touch with the collectors, and can secure advantageous rates. We are interested with the best concerns, and enjoy a large sale for finest Himalayan and Assam-grown teas. Samples are at your disposal if desired."

American Products for Argentina.

Marques & Castillon, No. 186 Entre Rios, Buenos Ayres, Argentine Republic, S. A., write the MANUFACTURERS' RECORD:

"We have been for some time greatly interested in introducing American goods into this market, feeling an especial predilection for all kinds of machinery, such as agricultural and electrical supplies, hardware and chemicals. We have mastered English so far as to understand it. In the interest of the international exhibition at this place, if you desire it we shall be glad to send you details, photographs, etc.; in fact, everything of a commercial nature that might possibly interest your manufacturers. At same time we are prepared to send you statistical information of these republics that might possibly be of interest to your review."

For Opium Importers.

Spiro H. K. Souroudjjeff, Salonica, Turkey, writes the MANUFACTURERS' RECORD:

"I beg to state you that I want to be in communication with some American firms that are importing opium. As you are in a position to know all the importers of this article, I should be much obliged if you could send me by return mail the addresses of the most important firms."

Interested in Leather.

P. P. Nicolas T. Karameros, 15 Rue Aristotelous, Athens, Greece, writes the MANUFACTURERS' RECORD:

"I am interested in leather (glazed kids), and I beg to ask your kindly help in this matter."

Wants Agencies for Berlin.

Otto Waser, 2 Calvin street, Berlin, Germany, writes the MANUFACTURERS' RECORD:

"I beg you to please bear in mind that I would gladly act as agent for any suitable American firm in good standing."

MECHANICAL

Ventilation for Mines.

Mine ventilation, of coal mines in particular, is one of the problems confronting mine operators. Mines are becoming more dangerous as the work extends deeper and the volume of gas increases. It is

mining. Anything which will lessen the cost of production and conserve the health and protect life and limb of those who gain their livelihood in the mines is a matter of great concern not only to the industry itself, but to the nation in general.

Anyone acquainted with the rudiments of mining knows something about a core drill and its use in connection with ex-

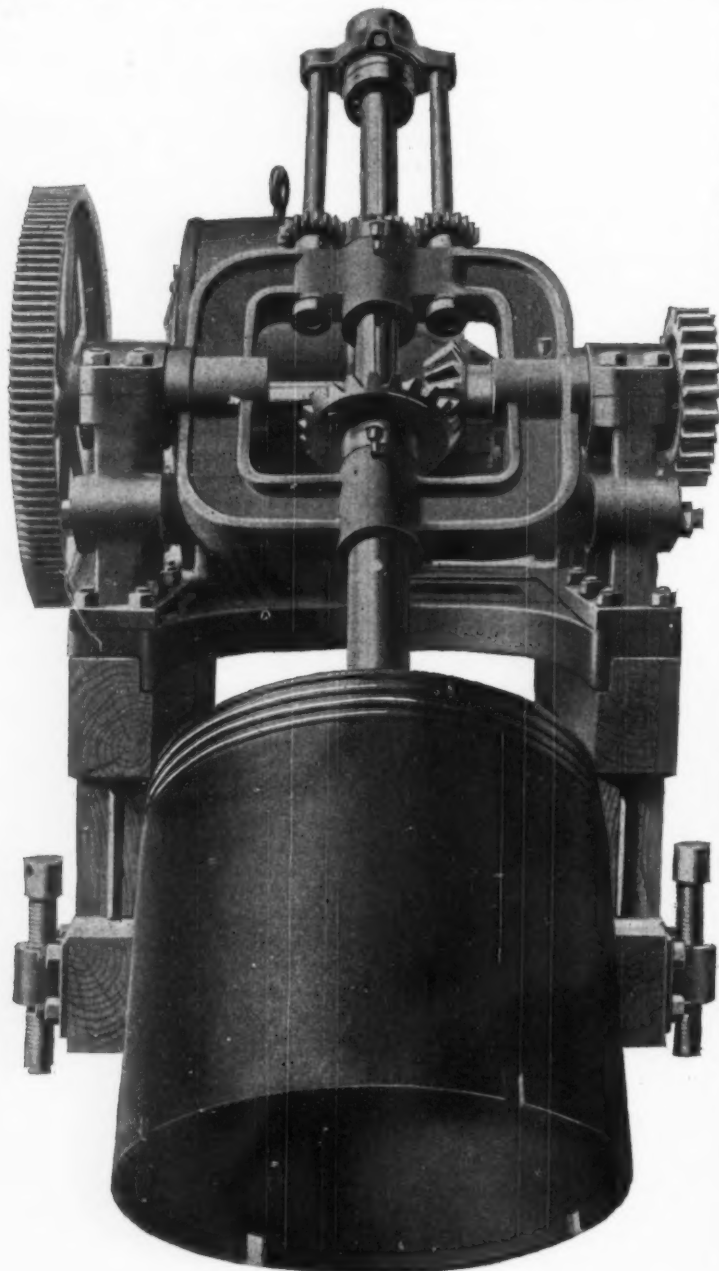
through was a trap rock concrete embankment. Some of the drilling was done in places where the bore holes penetrated cement reinforced by steel beams, and elsewhere iron drain pipes and the like intersected the line of the bore hole. All of the holes drilled were at an angle, and the average cutting rate was two feet per hour.

An accompanying view represents the core removed from a hole drilled at an angle of 55 degrees from the vertical. In one of these cores there is embedded a section of an eight-inch eye-beam, and in another an iron pipe two inches in diameter. Both the steel beam and iron pipe were severed without any appreciable reduction in the speed of cutting. The wear on the bit was one-quarter of an inch per foot, and 10 pounds of shot was used in drilling the same distance. Numerous seams and openings caused by imperfect setting of the cement, as well as severed pipes large enough to drain in a few minutes the water from an ordinary bore hole, offered not the slightest hindrance to the work. Irregular and broken formations are of no consequence in drilling large holes, as has been demonstrated in similar operations. The detritus or sludge from the kerf is sufficient to close all save large seams or crevices, and through which the heavy tools under a high momentum advance with remarkable rapidity.

"In mining operations, where the headroom will permit, these drills can be profit-

the workings much better than that now obtained through the shaft method of ventilation. The size of these holes would be ample for the installation of permanent ladders, which would serve as exits from the workings in case of accident, and as such they would be of the greatest assistance in rescue work.

"There would be much less difficulty in reaching and extinguishing mine fires, which under present conditions are oftentimes so located that the affected points are inaccessible to any human agency, and which unmolested continue until checked at some place remote from their origin. To be able to reach a fire quickly, and while still in the incipient stage, would save enormous sums hitherto wasted for lack of aantage point from which to begin the attack. Apart from providing a means of ingress and egress for miners, these large bore holes would supply to the workers a wholesome atmosphere under more natural conditions than is at present provided. At each opening could be installed an electrically-driven fan which would force air into the workings or exhaust the air from the mine as need be. Ventilation would not be the only purpose for which these bore holes could be advantageously used, for they could serve as conductors for pipes and cables, and would in many cases shorten the distance to which such lines must be carried. To some these suggestions may seem impracticable or the cost prohibitive.



FOR PROVIDING MINE VENTILATION.

apparent that better methods of ventilation must be used.

Mine accidents are frequent, between 8000 and 10,000 miners being killed in American mines each year. In European coal mines one employee in every 1000 is killed annually, whereas in the United States the yearly death rate is about 4 out of 1000. This high mortality is attributed to many causes, chiefly the explosions of gas and dust.

Some American authorities have suggested that mine ventilation be improved by boring holes from the surface into the mine workings, as well as into the so-called "riders" overlying the coal seams; thus, they contend, the volume of explosive gas within the mine would be materially lessened and the "riders" would be freed of their pent-up gases.

There is no doubt that explosions of gas emanating from the "riders" are often responsible for the expensive and fatal roof falls in the working drifts of the main seams.

There is not an industry which is more receptive to new appliances than that of

platory work. Among those informed, but few thus far have given any consideration to it as a device by the aid of which present conditions may be improved and life within our mines protected. It is not difficult to do this by drilling bore holes large enough to admit through them any human being. Information, therefore, concerning such work will doubtless be interesting, and perhaps point the way to what gives promise of being a most reasonable method of ventilating our coal mines, as well as providing additional openings to and from them.

Work recently performed by the War Department through the Corps of Engineers with a Terry core drill (see accompanying illustration) has established the practicability of drilling bore holes 30 or 40 inches in diameter, vertically or at an angle, and to any reasonable depth. That drill is manufactured by the Terry Core Drill Co. of 30 Church street, New York, which company says: "The drill used was of the class D type, and equipped with tools for boring a 29-inch hole. The work was in New York, and the material bored



DRILLED FOR MINE VENTILATION.

ably employed for sinking winzes or boring holes for use as ore chutes. Such operations are now being conducted with a Terry drill in a large mine in Northern New York. It is, however, to those concerned in the ventilating of mines, and of coal mines in particular, that this subject should be of the greatest interest, both from an economic and humanitarian point of view.

"Several holes 30 inches in diameter or larger can be drilled for the cost of sinking a single shaft, and if properly located they would supply a circulation of air to

As a matter of fact, such is not the case, but even if the actual cost were high, it would appear that any cost would be reasonable which would provide a method whereby life and property would be conserved.

"To the mine owner this method of ventilation offers the cheapest insurance he can procure, and the improved working conditions it would afford within the mine would stimulate those of a higher order of intelligence to seek therein employment where hitherto they would not venture."

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

The Daily Bulletin of the Manufacturers' Record is published every business day in the year for the purpose of giving the earliest possible news in regard to new industrial, railroad and financial enterprises organized in the South. It is invaluable to contractors, manufacturers, engineers and all others who want to get in touch at the earliest moment with new undertakings or the enlargement of established enterprises. The subscription price is \$25 a year. All advertising contracts in the Manufacturers' Record extending over a period of three months include a subscription for the length of time of the contract to the Daily Bulletin.

BRIDGES, CULVERTS, VIADUCTS

Ark., Fort Smith.—Arkansas Bridge Co., H. P. Daly, secretary, awarded contract at \$115,194.06 to Arkansas Bridge Co. of Fort Smith to construct superstructure of bridge across Arkansas River between Fort Smith and Van Buren, and at \$148,210.50 to Kahmann & McMurray, Kansas City, Mo., to construct substructure. (Recently mentioned.)

Ark., Paragould.—City awarded contract for construction of steel bridge across Eight-Mile Creek recently noted; J. R. Thompson, Mayor.

D. C., Washington.—Bids will be opened June 27 for constructing concrete and rubble arch bridge on Beach Driveway, Rock Creek, above Military Rd.; Cuno H. Rudolph and others, Commissioners. (See "Machinery Wanted.")

Fla., West Palm Beach.—Palm Beach county will construct bridge across drainage canal at Boynton, Fla.; bids to be opened July 5; R. H. Rousseau, chairman pro tem. of County Commissioners. (See "Machinery Wanted.")

Ga., Columbus.—Board of Public Works, W. C. Campbell, superintendent, will open bids July 18 for construction of concrete-steel arch bridge (Melan System) over Chattahoochee River at Dillingham St. (Previously mentioned. See "Machinery Wanted.")

Ky., Louisville.—Kentucky & Indiana Bridge

& Railroad Co., W. M. Mitchell, general manager and chief engineer, awarded contract at about \$250,000 to Foster-Creighton-Gould Company, Nashville, Tenn., to construct river piers for double-track bridge to be built across Ohio River at 31st St.; contract covers erection of eight concrete piers, requiring 25,000 square yards of concrete; superstructure of bridge will be of steel; total estimated cost \$2,000,000, to be derived from \$1,000,000 bond issue; remaining \$2,000,000 bond issue will be held in reserve to carry out any improvement plans that may be formed while bridge is in course of construction. (Recently mentioned.)

S. C., Greenville.—City awarded contract at \$1000 to J. R. Lawrence, engineer, Greenville, to construct cement culvert at Washington St.; A. E. Sussex, City Clerk. (Recently mentioned.)

S. C., Greenville.—City has engaged H. S. Jaudon, Savannah, Ga. (present address, Greenville), engineer in charge of construction of bridge across Reedy River; date of opening bids not set. (Bond issue of \$200,000 recently reported voted for this bridge and paving.)

Tenn., Knoxville.—Board of Public Works awarded contract conditionally to Claude Hood of Knoxville to construct Water St. bridge.

Tenn., Memphis.—Shelby county will construct steel or concrete bridge on Macon road; bids opened June 20; St. George Richardson, County Engineer.

Tenn., Memphis.—Shelby county will construct concrete culvert, 8x24 feet, across 17-mile branch on Poplar St.; bids to be opened June 28; St. George Richardson, County Engineer. (See "Machinery Wanted.")

Tenn., South Pittsburg.—City will construct concrete arch across sewers on Cedar Ave. Address The Mayor. (See "Road and Street Work.")

Tex., San Antonio.—Crystal City-Gardendale Railroad Co., Mason Williams, president, will construct bridge across Nueces River.

W. Va., Bradshaw.—McDowell County Commissioners will construct bridge across Dry Fork.

W. Va., Charles Town.—J. E. Burns, E. E. Cooke and H. C. Getzendanner are promoting organization of company to construct bridge across Shenandoah River in Jefferson county; structure to be 1000 feet long, with concrete piers and steel girders; plans not fully determined; H. C. Getzendanner may be addressed.

W. Va., Vivian.—Sycamore Coal Co. will erect three-trestle bridge across Sycamore Creek.

CANNING AND PACKING PLANTS

Fla., Sanford.—Harry Ward will establish cannery for tomatoes; erect building next season and equip for canning vegetables and fruit and manufacturing guava jelly and paste and tomato catsup.

N. C., Winston-Salem.—T. K. Reniger will establish cannery.

S. C., Georgetown.—Georgetown Canning & Gin Co. incorporated with \$10,000 capital stock by J. B. Steele, H. B. Springs, G. B. Sanders and others.

CLAYWORKING PLANTS

Ala., Fayette.—Brick.—J. R. Copeland of Birmingham, Ala., contemplates establishment of brick plant; will use gas for fuel.

Ark., Ravenden Springs.—Brick.—Joe Schmidt Brick Co., Pocahontas, Ark., will establish brick plant.

Ark.-Tex., Texarkana.—Brick.—Buffalo Paving Brick Co., Buffalo, Kans., is reported as contemplating establishment of plant for manufacturing vitrified brick from shale.

Ark.-Tex., Texarkana.—Brick.—Texas & Pacific Coal Co., Thubert, Tex., will probably establish plant for manufacturing vitrified brick from shale.

Ga., Milledgeville.—Brick.—Baldwin County Brick & Pottery Co. reorganized; E. N. Ennis, president; Julius A. Horne, vice-president, secretary and treasurer; George G. Reid, manager; will make improvements and increase output.

Tex., Comanche.—Bricks.—D. L. Morris reported to contemplate establishment of sand-lime brick plant.

Va., Richmond.—Crockery.—N. Klein & Son

incorporated with \$35,000 capital stock; O. D. Pitts, president; W. M. Miller, vice-president; B. C. Lewis, Jr., secretary; T. M. Tignor, treasurer.

COAL MINES AND COKE OVENS

Ala., Birmingham.—Walker County Coal Co. incorporated with \$50,000 capital stock; W. J. Gilmore, president; A. J. Gilmore, vice-president; R. D. Johnson, secretary.

Ala., Jasper.—Bankhead Coal Co. (recently reported incorporated with \$75,000 capital stock) will continue operation of mines at Carbon Hill; 260 acres; daily product 300 to 500 tons; W. B. Bankhead, president; J. H. Bankhead, Jr., secretary-treasurer; A. P. Smith, manager.

Ala., Woodward.—Woodward Iron Co. signed contract (at \$625,000) recently noted awarded to H. Koppers, Joliet, Ill., to build 60 by-product ovens; estimated production 655 tons of coke in 24 hours, 4,700,000 cubic feet of gas, 4700 gallons of tar and 9.4 tons of sulphate of ammonia; by-product plant includes direct ammonia recovery process, and will be built with capacity to handle by-products from plant when enlarged to 120 ovens; rumored company plans future expenditure of about same amount for further Koppers ovens.

Ky., Baskett.—Pittsburg Coal Co. (recently noted to acquire coal property) purchased plant of Green River Coal Co., consisting of over 4000 acres mineral right, mine with equipment, miners' houses, commissary store, tug, coal float and eight barges; also office and lot in Evansville; with present adjoining holdings, total acreage to be developed 5500; estimated production winter, 1910, 1000 tons daily from two mines; company is repairing barges.

Ky., Martin County.—John B. Stevenson and Watts, Ritter & Co., Huntington, W. Va., purchased. It is reported, coal and timber land for development.

Ky., Providence.—Gaines Coal Co. incorporated by S. J. Gaines and W. L. Doane of Birmingham, Ala.; purchased coal-mining property for improvement.

Tex., Jermyn.—Texas Coal Mining Co., recently reported incorporated (under Dallas, Tex.) with \$25,000 capital stock, has elected J. C. McKay president, A. E. Firmin vice-president, L. A. Watelsky secretary-treasurer; will develop 900 acres of coal land.

W. Va., Philippi.—Sterling Coal Co., Ltd., chartered with \$3,500,000 capital stock to develop coal lands; president, W. F. Tye, secretary, H. G. Ratcliffe, both of 7 King St. E., Toronto, Canada; manager, H. D. Hileman, 312 Williamson Bldg., Cleveland, O. (Company lately mentioned as planning developments.)

W. Va., Welch.—Davy-Pocahontas Coal Co. incorporated with \$500,000 capital stock by George E. Price, H. B. Smith, R. S. Spilman, R. M. Price and Buckner Clay, all of Charleston, W. Va.

CONCRETE AND CEMENT PLANTS

Ala., Guntersville.—Jack Ivey is interested in establishment of plant to manufacture concrete blocks.

COTTON COMPRESSES AND GINS

Ark., Mansfield.—Mansfield Gin & Mill Co. incorporated with \$25,000 capital stock by A. T. Boothe (president), L. C. Packard, H. S. Groves and others.

Ark., Morrilton.—Morrilton Cotton Warehouse Co. is arranging to erect cotton compress.

Ga., Cordele.—Central Oil & Fertilizer Co. will erect cotton gin.

Ga., Greensboro.—Greensboro Oil Mill Co., C. M. King, manager, will establish cotton gin.

La., Logansport.—Hardy Bros. will establish three-stand 70-saw cotton gin.

Miss., Corinth.—Farmers' Union Mill & Gin Co. awarded contract to A. H. Patrick, Corinth, for erection of plant; cost \$3000.

Miss., Vicksburg.—Planters' Ginning Co. incorporated with \$10,000 capital stock by R. A. Quin, J. C. Bryson and others.

Tex., Corpus Christi.—Sealy-Hutchins Company, Galveston, Tex., will establish cotton compress.

Tex., Geronimo.—Von Boeckmann Ginning Co. incorporated with \$12,000 capital stock by William Timmerman and E. H. Von Boeckmann.

Tex., Fate.—Farmers' Gin & Cotton Co., recently reported incorporated with \$5000 capital stock, awarded contract to Will Pennington (address care of company) for erection of ginning plant; 20x70 feet; wood and sheet iron; cost \$1150; machinery to cost \$5000; daily capacity 50 bales of cotton; Bob Smith, president; W. A. Curfman, secretary; C. A. Vernon, treasurer. (See "Machinery Wanted.")

Tex., Quanah.—Quanah Compress & Warehouse Co. has elected T. F. West, Waco, Tex., president-manager; P. A. Whaley, acting secretary; J. B. Goodlet, treasurer; capital stock, \$45,000; will open bids at once for erection of \$10,000 warehouse; contract awarded for erection of \$25,000 compress to Webb Compress Co., Minden, La. (Chamber of Commerce recently noted to sign contract for \$45,000 compress and warehouse.)

Tex., Sutherland Springs.—Farmers' Gin Co., recently reported incorporated with \$10,000 capital stock, will erect ginhouse; cost \$2000; mill construction; install gin machinery to cost \$6000; J. C. Denron, president; John Reuss, vice-president; R. A. Houck, secretary; W. E. Cotter, treasurer; J. W. Wiseman, manager.

Tex., Victoria.—Victoria Compress Co., recently reported incorporated with \$35,000 capital stock, awarded contract to E. N. Phillips, Victoria, for erection of building; will install hydraulic compress machinery to cost \$35,000; A. N. Ivanchich, president; P. R. Swann, manager. (See "Machinery Wanted.")

COTTONSEED-OIL MILLS

Ala., Birmingham.—Farmers' Cotton Oil Co. incorporated by S. P. Brown, P. G. Riley and T. J. Kidd of Birmingham; will erect \$100,000 cotton-oil mill; brick and steel construction.

Ala., Birmingham.—W. L. Kidd, Albany, Ga., is reported to establish cottonseed-oil mill.

Ga., Byromville.—Byromville Manufacturing Co., H. H. Brock, secretary, awarded contract to W. D. Benson, Cordele, Ga., for erection of oil mill recently noted; main building 36x154 feet; electric lighting; cost \$10,000.

N. C., Mount Gilead.—F. McAulay, L. P. Byrd, O. C. Bruton and others are promoting establishment of \$20,000 cotton-oil mill.

Tex., Byers.—Byers Cotton Oil Co. is name of company recently noted to establish oil mill and erect buildings described; following officers elected: J. W. Harding, president; R. L. Lincoln, first vice-president; L. J. Curtis, secretary-treasurer.

DRAINAGE AND IRRIGATION

Fla., Tallahassee.—Board of Drainage Commission, J. C. Luning, secretary, awarded contract to Furst-Clark Construction Co., Fidelity Bldg., Baltimore, Md., for proposed Everglades drainage; contract approximates \$3,000,000 and 25,000,000 cubic yards of work; commission mentioned in April as inviting bids for excavation of five drainage canals about 215 miles long; J. O. Wright, Tallahassee, chief engineer for commission.

Ark., Jonesboro.—J. H. Burke awarded contract to Walb Construction Co., La Grange, Ind., to construct Gum Slough drainage ditch in Drainage District No. 4; about 270,000 yards of dirt, making cost about \$21,000.

Ga., Waycross.—Gulf Coast Land & Engineering Co. will increase capital stock from \$20,000 to \$30,000; plans to construct series of canals to drain Okefenokee Swamp, developing it for agricultural purposes; understood necessary machinery has been ordered and that tile will be used in drains; Edwin G. Kastenhuber, president; John G. Schmidt, vice-president; C. W. Kimball, treasurer; Walter Schmidt, secretary. (Mr. Kastenhuber and associates recently reported as planning this development.)

La., New Orleans.—Calvin A. Fleming and William F. Hunt, St. Paul, Minn., purchased Parthude Plantation of 1200 acres and will expend \$200,000 in drainage; will erect about 500 dwellings, plant oranges and other fruit trees, divide property into small farms and sell to Northern farmers. Address Messrs. Fleming and Hunt, care of Page & Newton, New Orleans.

Tex., San Antonio.—Espejo Land & Irrigation Co. incorporated with \$64,000 capital stock; will complete irrigation of Espejo Ranch, comprising 18,600 acres, fronting for

two miles on Rio Grande; B. F. Nicholson is president; Frank Curtice Smith, vice-president; W. B. Tuttle, secretary-treasurer.

ELECTRIC LIGHT AND POWER

Ala., Bessemer.—City granted franchise to Birmingham (Ala.) Water & Light Co. to furnish electric lighting and water; company proposes to construct dam across Warrior River. (Recently mentioned.)

Ala., Montgomery.—Richard Tillis purchased Citizens' Light & Power Co.'s plant for about \$35,000 and will enlarge; Paul Whiting will be retained as general manager.

Ala., Opelika.—City will vote July 14 on issuance of \$85,000 of bonds for construction of electric-light plant and water-works. Address The Mayor. (Election recently mentioned declared invalid.)

Ark., Imboden.—Dr. E. N. F. Sullivan, representing People's Bank, purchased for \$1500 and will improve Imboden Power & Light Co.'s plant, including electric-light plant, water-works, 50-year franchise from city, and sawmill.

Ark., Monte Ne.—City awarded contract for electric-light plant. Address The Mayor.

Fla., Ocala.—City purchased and will install in electric-light plant two boilers of 175 horse-power each; two 125-horse-power boilers now in use will be used as auxiliary equipment; expenditure, \$3000; later it is proposed to install two dynamos which will cost complete \$12,000. Address The Mayor.

Fla., St. Augustine.—St. Johns Light & Power Co. will expend \$25,000 in proposed improvements to electric-light and power plant; additional equipment has been ordered, including 1200-horse-power Corliss engine, 650-kilowatt generator and two exciter sets, one motor-driven and one engine-driven.

Ga., Donaldson.—City awarded contract for erection of power-house for electric-light plant. Address The Mayor. (Bond issue of \$20,000 recently reported voted for electric-light plant and water-works improvement.)

Ga., Lafayette.—City will have plans and specifications prepared by J. B. McCrary & Co., Atlanta, Ga., for electric-light and water-works plants.

La., Whitecastle.—City granted franchise to Dunlap Electric Light Co., Plaquemine, La., to furnish electric lighting; company will also supply lighting for Turnerville (suburb of Plaquemine) and Addis, La.

Md., Baltimore.—Richard B. Fentress of Norfolk, Va., is understood to be planning organization of company to build plant to furnish electricity for light, heat and power; Carrington & Carrington, Maryland Telephone Bldg., are his Baltimore representatives.

Miss., Amory.—City will expend \$65,000 for improvements to electric-light plant (recently noted purchased) and installation of water-works system; capacity of electric-light plant 150 kilowatts; Solomon-Norcross Company, Atlanta, Ga., engineer in charge.

Miss., Osyka.—City will issue \$20,000 of bonds July 14 for construction of electric-light system and water-works previously noted; Xavier A. Kramer, Magnolia, Miss., submitted plans; Clinton Thompson, Mayor.

Mo., Carthage.—Spring River Power Co. will construct substation to furnish electricity to quarries along north side of Spring River; 33,000 volts to be reduced to 2300 volts for quarry use; building, three stories, of steel construction; building material and equipment ordered.

Mo., Greenfield.—Greenfield Light & Power Co., J. F. Johnson, president (recently reported incorporated with \$10,000 capital stock), will operate established plant; contemplates enlargement in future and addition of ice and water works. (See "Machinery Wanted.")

Mo., Kansas City.—Electric Power Co. incorporated with \$250,000 capital stock by W. D. Wood, Estel Scott and J. E. Trogonod.

Mo., Malden.—Archer Roehm & Co., engineers, Malden, prepared plans for electric light plant and water-works; estimated cost, \$30,000; bids will soon be invited.

Mo., Nevada.—Nevada Water, Light & Traction Co. incorporated with \$350,000 capital stock by Henry C. Barker, William W. Seibert, Edward Willard and others.

Mo., Tipton.—City has not let contract for plans for electric-light plant recently noted; bond issue, \$17,500; J. S. Worley Company has done some preliminary work; Jos. Sonnenhauser, clerk.

Mo., Slater.—City voted issuance of \$27,500 of bonds for building electric-light and water-works plants; also proposed to extend transmission lines; Burns & McDonnell, engineers, Scarritt Bldg., Kansas City, Mo.

N. C., Williamston.—Commissioners are prepared to award electric-lighting franchise; will receive offers until August 1, reserving right to accept satisfactory bid in the meantime; B. F. Godwin, Mayor; C. H. Godwin, secretary; bond issue recently noted. (See "Machinery Wanted.")

Okla., Cherokee.—City will open bids June 30 for extension of electric-light system and water-works; Burns & McDonnell, engineers, Scarritt Bldg., Kansas City, Mo.; A. J. Titus, Mayor. (Recently mentioned. See "Machinery Wanted.")

Okla., Kingston.—City has contracted for machinery for proposed electric-light plant. Address The Mayor. (See "Water-works.")

Okla., Oklahoma City.—Oklahoma Railway Co., Anton D. Classen, president (recently noted to increase machinery capacity) will make addition to power-house of 3000 kilowatts; cost \$150,000; no contract; construction by company.

S. C., Ellmore.—City votes June 23 on issuance of \$10,000 electric-light and water bonds. Address The Mayor.

S. C., Rock Hill.—Board of Public Works, J. B. Johnson, chairman Water and Light Commission, will install auxiliary steam plant in connection with electric-light plant, which will provide for 100 arc and 3000 to 4000 incandescent lights; Mr. Rucker, electrical engineer, Charlotte, N. C., recently noted as preparing plans and specifications.

Tex., Coleman.—City voted \$20,000 bond issue for improving electric-light plant. Address The Mayor.

Tex., Corpus Christi.—Corpus Christi Street Railway Co. will, it is reported, construct electric power and light plant.

Tex., Fort Crockett.—F. E. Newberry Electric Co., Century Bldg., St. Louis, Mo., has contract at \$11,943.97 for construction of electric-lighting system for lighting barracks; Capt. P. Whitworth, constructing quartermaster.

Tex., Fort Worth.—Consumers' Light & Heating Co. increased capital stock from \$400,000 to \$800,000.

Va., Richmond.—Common Council adopted ordinance providing for appropriation of \$20,000 for illumination of Broad St.; Chas. E. Bolling, City Engineer.

FERTILIZER FACTORIES

Ala., Andalusia.—Andalusia Fertilizer Co. organized with \$50,000 capital stock by T. E. Henderson, W. R. Tisdale, S. B. Milligan and others.

Ala., Florence.—Lauderdale County Farmers' Union Warehouse Co. contemplates converting warehouse into fertilizer factory; cost \$100,000.

Ala., Troy.—Standard Chemical & Oil Co. will make improvements to plant, including installation of rock-crushing machines and machinery for generating electric current for operating all machinery except ice plant and oil and chemical departments, which will be operated by steam.

Ga., Douglas.—Sidney Stubbs, Macon, Ga., is organizing company with \$60,000 capital stock to establish guano factory, cotton gin and cotton warehouse.

Ga., Montezuma.—Montezuma Fertilizer Works, recently incorporated with \$60,000 capital stock, has begun construction of fertilizer works and acid chamber; cost \$100,000.

N. C., Newbern.—Virginia-Carolina Chemical Co., Richmond, Va., is reported to establish \$25,000 fertilizer factory.

S. C., Sumter.—Henry J. Harby and others organized company with \$10,000 capital stock to establish fertilizer factory; daily capacity 100 tons.

Va., Chincoteague.—Coast Fishing Corporation incorporated with \$200,000 capital stock; will construct two fishing steamers, catch menhaden and establish plant for converting into fertilizer and oil.

FLOUR, FEED AND MEAL MILLS

Ky., Owensboro.—Anglo-American Mill Co. incorporated with \$100,000 capital stock by L. Freeman Little, Cecilia Little and others.

S. C., Woodruff.—C. S. Jones, Fountain Inn, S. C., will install 30-barrel roller mill; later will install ice plant.

Tex., Austin.—Sequin (Tex.) Milling & Power Co. purchased Quality Mills; will expend \$30,000 for improvements, including installing additional machinery to increase capacity, etc.

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Foundry.—Caldwell-Watson Foundry & Machine Co., T. J. Caldwell, president, will rebuild plant; buildings

to be of steel and reinforced concrete; including electrical cranes and other electrical equipment; estimated cost, \$25,000.

Ala., Queenstown, P. O. Birmingham.—Stoves.—Colonial Stove Works, C. W. Shinn, president, contemplates increasing capital stock from \$30,000 to \$40,000; H. H. Ellis, attorney, 510 Farley Bldg., Birmingham.

Miss., Columbia.—C. B. Rice, Garyville, La., will erect \$15,000 foundry and machine shops.

Mo., Joplin.—Foundry.—Webb City & Carterville Foundry & Machine Co., Webb City, Mo., contemplates further increasing capacity of Joplin plant.

Mo., St. Louis.—Stoves.—Charter Oak Stove & Range Co. is having plans prepared for plant.

N. C., Charlotte.—Foundry.—J. Hackett Foundry Co. incorporated with \$125,000 capital stock by J. Hackett, Theodore W. Long and others.

N. C., Greensboro.—Foundry.—W. B. Cook will erect foundry; building to be of brick, one story high.

Tenn., Athens.—Foundry.—Athens Foundry & Machine Co. incorporated with \$10,000 capital stock by A. R. Miller, W. R. Craig, R. F. Dennis and others.

Tenn., Chattanooga.—Plows.—Chattanooga Plow Co., Carter and Main Sts., will erect addition to buildings on Fort St.; brick; two stories; one side will be glass; gas and electric lighting; cost \$4000.

Va., Norton.—Foundry.—Norton Car & Foundry Co. has completed plans for reorganization with capital stock of \$40,000; will erect building and make other improvements. (Recently mentioned.)

Va., Staunton.—Plows.—Leader Plow Co., W. A. Payne, president (recently reported incorporated) takes over plant of Leader Plow Co., partnership; no new buildings; manufactures garden plows; daily capacity, 100.

GAS AND OIL DEVELOPMENTS

Ala., Birmingham.—Standard Oil, Gas & Asphalt Co. organized with \$1,000,000 capital stock by Max J. Winkler of Birmingham, J. G. Gray and M. B. Hawkins of Wilmington, Del.; purchased 11,000 acres of land; will develop oil, gas and asphalt deposits and refine, manufacture, etc. (Recently noted.)

La., Lake Charles.—Edgerly Oil Co. incorporated with \$20,000 capital stock; Geo. W. Collier, president; J. W. Hooks, vice-president and general manager; W. H. Turner, secretary-treasurer.

La., Lake Charles.—Tip-Top Oil Co. incorporated with \$100,000 capital stock; J. W. Gardiner, president, Lake Charles; Charles O. Noble, vice-president and general manager, Jennings, La.; D. J. Landry, secretary-treasurer, Lake Charles; leased 40 acres of land in Vinton field and will develop.

La., Shreveport.—Craig Oil Co. will be incorporated with \$50,000 capital stock by Geo. M. Craig, W. E. Hall, S. O. Latimer, all of Port Arthur, Tex., and others.

Okla., Tulsa.—Premier Petroleum Co., Central National Bank Bldg., incorporated with \$3,000,000 capital stock; J. E. Crosbie, president; J. De Vries, secretary; is merger of Crosbie, Holland, Roeser and other interests.

Tex., Fort Worth.—Gulf Oil Co. incorporated with \$500,000 capital stock by B. Deutscher, P. A. Hesig and C. E. Walden.

Tex., Jefferson.—Potters Point Oil Co. incorporated with \$20,000 capital stock by B. F. Rogers, D. L. Wright, L. G. Braden and others.

Tex., Uvalde.—Gulf Refining Co., Pittsburg, Pa., will erect storage tanks.

ICE AND COLD-STORAGE PLANTS

Ga., Atlanta.—Robert Gamble, president, Florida Ice Mfg. Co., Jacksonville, Fla., will establish ice and cold-storage plant; capacity 100 tons; cost \$150,000; plans enlarging to \$500,000 plant; will also erect 100-ton plant in Macon, Ga.; contemplates establishment of other plants.

Ga., Macon.—Robert Gamble, president, Florida Ice Mfg. Co., Jacksonville, Fla., will build 100-ton ice plant. (See Ga., Atlanta.)

Miss., Natchez.—Natchez Dressed Beef Co. will erect addition to cold-storage plant.

Mo., St. Louis.—Hermann Ice Manufacturing Co. incorporated with \$25,000 capital stock by William Hermann, Joseph Hermann and others.

Okla., Kingston.—City will establish ice plant. Address The Mayor. (See "Water-works.")

IRON AND STEEL PLANTS

Ala., Sheffield.—Sheffield Coal & Iron Co. (New York office, 71 Broadway) will not in

the near future make recently-noted repairs to furnace No. 2.

Va., Roanoke.—Rolling Mill.—Jeffries Iron & Steel Co. will be name of company lately reported to be incorporated to operate West End Rolling Mills; organization by O. L. Jeffries of the Eastern Steel Co., Pottsville, Pa.; John S. Hagan of Philadelphia, Pa., and associates; plan to add new machinery and make improvements as recently outlined, address, care of Charles A. Ball, 5 West Campbell Ave., Roanoke.

W. Va., Wheeling.—Steel Plant.—Whitaker-Glessner Company is developing plans for construction of steel plant addition to present facilities for manufacturing steel and iron sheets; details not determined and engineer in charge not engaged.

LAND DEVELOPMENTS

Ala., Dyas.—Home Gardens Land Co. incorporated with \$150,000 capital stock by Edward J. Belzner, John H. Joice, John M. Green and others.

Ark., Hot Springs.—Southern Land Improvement Co., recently reported incorporated with \$50,000 capital stock, has elected J. C. Higgins, president; Chas. N. Rix, first vice-president; W. P. Cole, secretary; W. W. Waters, treasurer; will subdivide land into building lots and develop.

Fla., Hastings.—Hastings Development Co. incorporated with \$10,000 capital stock; C. A. Dupont, president, Hastings; I. I. Moody, vice-president, Bunnell, Fla.; G. W. Waller, secretary, Hastings; J. F. Lambert, treasurer, Bunnell, Fla.

Fla., Tallahassee.—Jefferson Nursery Co. incorporated with \$50,000 capital stock; J. F. Williams, president; J. A. Granger, vice-president and general manager; H. A. Barrows, secretary-treasurer.

Ky., Louisville.—Walnut Hills Realty Co. incorporated with \$6000 capital stock by William Meyer, A. T. Wolford and William E. Simpson.

La., Kelly.—James Gould, Pine Bluff, Ark., and R. J. Edwards, Oklahoma City, Okla., have purchased 20,000 acres of sugar-cane land, and will subdivide into 40-acre tracts.

N. C., Wadesboro.—Dixie Development Co. incorporated with \$100,000 capital stock by John C. Gilledge, John W. Odom and others.

Okla., Oklahoma City.—Millwood Development Co., recently reported incorporated with \$100,000 capital stock, will develop 1600 acres of land for town, in connection with construction of Oklahoma Bag & Cotton Mills. (See "Textile Mills.")

Tenn., Memphis.—Joseph Isle and associates purchased 10 acres of land for \$50,000; will subdivide and develop.

Tex., Beaumont.—Navidad Improvement Co., Los Angeles, Cal., purchased 15,000 acres of land near Beaumont and will develop for fruit farm; remove timber and stumps from several hundred acres and plant figs, oranges, etc.; will erect dwellings for employees, establish plants for manufacturing brick and tile for these houses, drain and irrigate the land, etc.

Tex., Brownsville.—Port Brownsville Sugar Lands Co. organized by Edwin S. Brondix of St. Louis, Mo.; R. L. Stell of Brownsville and others; purchased 51,000 acres of land on Rio Grande River and will develop city to be known as Port Brownsville; will construct main irrigation canal and many laterals; will dredge through the bar at mouth of Rio Grande, etc.

Tex., Palestine.—Michaux Park Land Co. incorporated with \$30,000 capital stock by Tucker Royall, W. M. Michaux, H. S. Davenport and others.

Tex., San Antonio.—Poteet Townsite Co. incorporated with \$30,000 capital stock by C. F. Summons, H. T. Hume and D. O. Ferrell.

Tex., Sinton.—George H. Paul of George H. Paul Land Co. purchased and will develop 60,000 acres of land near Sinton; will establish town on portion of property to be known as St. Paul, construct macadam roads, cultivate 7000 acres for personal use, with cotton as principal crop, etc.

Va., Lynchburg.—Peakland Corporation is negotiating for 215 acres of land for development as residence park; plan is to subdivide, install gas and electric lights and water mains, construct macadamized streets and granolithic sidewalks, etc.

Va., Norfolk.—Norfolk-Suffolk Farm Corporation, Sidney L. Nushbaum, president, 618 Citizens' Bank Bldg., recently reported incorporated with \$25,000 capital stock, will develop 245 acres, subdividing into five-acre tracts each.

W. Va., Martinsburg.—Tuscarora Realty Co. will develop 20 acres of land; receive estimates on 10,000 cubic yards dirt excava-

tion, 2000 cubic yards of rock, 11,000 square yards stone macadam paving, 4200 feet concrete curbing and gutter, 15,000 square feet cement sidewalk and several hundred feet 12-inch storm sewers; details will be furnished on application. (See "Machinery Wanted.")

W. Va., Romney.—Golden Orchard Co. incorporated with \$10,000 capital stock by W. H. Guthrie, W. J. Miles, G. H. Thomas and others.

LUMBER MANUFACTURING

Ala., Mobile.—Harry O. Hanson purchased 17,319 acres of timber land for \$63,222.07.

Ark., Corning.—W. B. Bayless & Co., Memphis, Tenn., purchased timber land and lumber and handle mill from Wheeler Land, Lumber & Handle Co.; reported purchase price, \$20,000.

Ga., Cecil.—J. N. Bray & Co. will rebuild burned lumber plant.

Ga., Ellijay.—Shippen Bros. Lumber Co., W. H. Shippen, president, will rebuild lumber plant recently reported burned; company's force will erect mill-construction building, install machinery for band sawmill and large planing mill; daily capacity 50,000 cubic feet lumber. (See "Machinery Wanted.")

Ga., Waycross.—Hebard Cypress Co. is proceeding to arrange for construction of proposed dry kilns and planing mill; former will be of brick and concrete and latter of reinforced concrete; machinery is being received.

Ky., Lexington.—Combs Lumber Co. increased capital stock from \$110,000 to \$200,000.

Ky., Martin County.—John B. Stevenson and Watts, Ritter & Co., Huntington, W. Va., purchased, it is reported, timber and coal land in Martin county for development.

La., Baskin.—J. W. Kesterson purchased 22,000 acres white and red oak, and pine timber; tract purchased known as "Vicksburg, Shreveport & Pacific Railroad lands"; price over \$350,000; Mr. Kesterson will erect double band sawmill at Baskin, and construct 25-mile tram road through timber; quartered oak a specialty; material mainly purchased.

Ky., Richmond.—Blanton-Congleton Lumber Co. incorporated with \$20,000 capital stock by J. R. Pates, W. E. Blanton and Lee Congleton.

La., Jena.—Trout Creek Lumber Co. purchased 5625 acres of timber land for \$285,000 from German-Boyd Lumber Co.

La., Oakdale.—Southwestern Lumber Co., Beaumont, Tex., purchased 10,178 acres timber land for \$87,500; doubtless for development.

Miss., Tishomingo.—General Lumber Co., J. O. Bailey, president, purchased cypress timber land and will erect sawmill; reported that equipment from mill near Hudsouth, Ark., will be removed to Tishomingo.

Miss., Brookhaven.—Central Lumber Co. increased capital stock from \$50,000 to \$100,000.

Mo., Appleton City.—Forest Park Lumber Co. incorporated with \$12,000 capital stock by Tom Burns, E. Vogel and W. B. Leslie.

N. C., Hunt Dale.—Carolina Lumber Co. recently reported organized with \$225,000 capital stock; H. E. Harman, president; A. St. Clair, vice-president; C. R. Brown, secretary-treasurer, all of Tazewell, Va.; A. J. Doss, manager, Hunt Dale; will develop 4500 acres of timber land and install band mill.

N. C., Hunt Dale.—Carolina Lumber Co. recently reported organized with \$225,000 capital stock, has elected H. E. Harman president, A. St. Clair vice-president, C. R. Brown secretary-treasurer, all of Tazewell, Va.; A. J. Doss, manager, Hunt Dale; will develop 4500 acres of timber land and install band mill; machinery will cost \$50,000.

N. C., Ramseur.—Fleta Lumber Co. incorporated with \$50,000 capital stock by W. H. Watkins, Sr., W. H. Watkins, Jr., and James D. York.

N. C., Unionville.—Unionville Mfg. Co. incorporated with \$125,000 capital stock by J. B. Little, Smith Bros. and others.

Okla., Kingston.—Thad Moody Lumber Co. is proceeding with erection of proposed sawmill for sawing crossties and hardwood lumber.

Tenn., Fordtown.—Frank S. Shell, Johnson City, Tenn., purchased timber land containing 1,000,000 feet of timber and will erect sawmill.

Tenn., Memphis.—Nolan Bros. Hardwood Co. incorporated with \$25,000 capital stock by L. C. Nolan, E. H. Nolan, J. W. Howard, John H. Humes and others.

Tenn., Pittsburg.—Pittsburg Lumber Co., Wm. Flinn, president, Pittsburg, Pa., purchased approximately 6000 acres hardwood timber in Carter county; contemplates opera-

tion and erection of band mill within next six months.

Tex., Manning.—Carter-Kelly Lumber Co. will install band mill; plant is now single-band mill with capacity of 100,000 feet daily.

Va., Arrington.—M. C. McCorkle & Son of Richlands, Va., advise they are making no arrangement for manufacture of 1000 acres timber land recently noted purchased; no machinery needed at present.

Va., Ellett.—W. S. Cash purchased timber land and will erect sawmills.

Va., Ellett.—Gilliam & Co. purchased timber land and will erect sawmills.

W. Va., Bradshaw.—J. R. Doney & Co. have purchased 1,000,000-foot tract of land and will cut timber.

W. Va., Wyoming County.—A. R. Wittenberg, Charleston, W. Va., purchased 4000 acres of timber and will erect sawmills; reported purchase price \$50,000.

MINING

Ala., Birmingham.—Fluorspar, Lead, etc.—Alabama Fluorspar, Lead & Mining Co. incorporated with \$100,000 capital stock; Thos. Roscoe, president and general manager; G. R. Harsh, secretary-treasurer.

Ark., Helena.—Helena Zinc & Mining Co. incorporated with \$150,000 capital stock; S. A. Woten, president; S. B. Straub, vice-president; D. T. Hargraves, treasurer; J. Bielsen, secretary.

Ga., Atlanta.—Sand.—Atlanta Sand & Supply Co., 201 Peters Bldg. (recently reported incorporated as Atlanta Sand Co.), has elected Bryan Sanders, president; J. D. Collins, Sr., vice-president; E. J. Wesley, secretary; F. B. Jamison, treasurer; sand pits at Zenith, Pope Ferry, Oakdale, Junction City, Peachtree Creek and Rex, all in Georgia; daily capacity 25 cars of sand.

Ga., Dahlonega.—Gold.—New Findley Gold Mining Co. incorporated with \$25,000 capital stock by E. E. Crisson and H. D. Gurley.

Mo., Joplin.—Lead and Zinc.—Indiana Lead & Zinc Co. incorporated with \$150,000 capital stock by J. T. Evans, Al B. Morris, J. B. Ball and others.

Mo., Aurora.—Zinc.—North Pole Mining Co. (recently reported incorporated with \$9000 capital stock) is increasing capacity of plant, previously worked by hand; 200 acres; present capacity, about seven tons clean zinc per day of 10 hours; cost of crushing, grinding and jigging machinery, \$10,000; V. T. Clayton, president; Chas. E. Spangler, vice-president and manager; John W. Hale, secretary-treasurer.

Mo., St. Louis.—Lead and Zinc.—St. Leger Mining Co. incorporated with \$50,000 capital stock by Matthew St. Leger, Adolph Kroeter and others.

Mo., St. Louis.—Lead and Zinc.—Empress Mining Co. incorporated with \$25,000 capital stock by William C. Brown, Fred A. Elliott and John M. Darr.

Mo., Webb City.—Lead and Zinc.—Little Box Mining Co. incorporated with \$100,000 capital stock by T. F. Lennan, G. W. Ball, W. S. Gunning and others.

Okla., Oklahoma City.—Sand.—Arkansas River Perfect Sand Co. incorporated with \$50,000 capital stock by D. E. Lahay, A. McMillar, C. H. Pittman of Oklahoma City and Charles Martin of Hominy, Okla.

Tenn., Lewis County.—Iron Ore.—Charlotte Lumber Co., Charlotte, Mich., Wm. B. Otto, president, and Fitch H. Beach, vice-president, is not yet ready to announce plans for development of timber and iron-ore lands in Lewis and Perry counties recently noted purchased by Messrs. Otto and Beach; R. C. Jones is secretary Charlotte Lumber Co. (See "Woodworking Plants.")

Tex., Cass County.—Iron.—Texas Iron & Coal Co. is planning thorough development of its 60,000 acres iron land in Cass and Marion counties; will install complete equipment of labor-saving machinery, to include steam shovels, washing and digging plant, etc., for large daily output; has begun shipments by water to Philadelphia, and will make other shipments by rail to furnaces in Middle States. Officers of company: President, E. J. Lavino, Bullitt Bldg., Philadelphia, Pa.; vice-president, T. W. Griffiths; treasurer, J. B. Adoue; secretary, Cloyd H. Read, each of Dallas, Tex.; directors include C. A. Keating, F. A. Johnston and A. G. Elliott, Jr., each of Dallas, Tex.; Harry A. Williams of Chicago, Ill., and A. B. Wolvin of Duluth, Minn., and Texas City, Tex.

Tex., Lubbock.—Copper.—Joseph A. Harris, James S. Lane and W. T. Dillard will develop copper deposits on Dalton Ranch.

W. Va., Wheeling.—Wheeling Limestone Co., recently reported incorporated with \$25,000 capital stock, will erect 32x100-foot build-

ing; concrete and white oak; day's labor; F. D. Enney, manager, is engineer in charge of construction; machinery and equipment to be installed includes crushers, pulverizers, screens, conveyors, cars, etc.; plant to have daily capacity of 1000 tons crushed stone, pulverized limestone and sandstone for building purposes; Geo. Rentsch, president; Christian Hamon, vice-president; F. P. Jones, secretary-treasurer.

MISCELLANEOUS CONSTRUCTION

Fla., St. Petersburg.—City will construct 300-foot to 400-foot-wide parkway, one mile long, with an outer breakwater 1500 feet to 1800 feet from shore; also contemplates construction of driveways, etc.; W. P. Pope, chairman Water-Front Commission; no contracts. (\$10,000 bond issue recently noted.)

Fla., Tampa.—Water-front Improvements.—Swann & Holsinger are having plans prepared by engineer C. R. Knight of Tampa for extension of 300-foot slip 500 feet farther; work will also include erection of docks and warehouses.

Fla., Tampa.—Docks, etc.—A. R. Swann, president of Swann & Holsinger Company, contemplates building 1000 feet of docks, with warehouses, etc., for ocean-going vessels; to be continuation of Hendry & Knight terminals (previously noted) to the East; docks 50 feet wide, built on concrete piling; portion of work, saw-tooth or lumber dock construction; approximate cost \$50,000 to \$60,000; on completion of plans, notice will be given and bids received by C. R. Knight, engineer in charge, address, care of Mr. Swann.

Ky., Louisville.—Concrete Basin.—Louisville Railway Co. will erect concrete basin at intersection of Jacob and Beargrass Sts.; estimated cost, \$10,000; boiler waste water from main power-house will be drained into basin and re-used for steam making.

La., New Orleans.—Sheds.—Port Commissioners, Hugh McCloskey, president, 601-602 Hibernia Bank Bldg., awarded contract to J. G. Callahan of New Orleans at \$11.23 per cubic yard, or \$8055.60, for construction of reinforced-concrete foundation piers for Branch M. King Shed, Eighth Harmony Shed No. 2, 6th St. Shed, 3d St. Shed and Soraparu St. Shed; engineer, A. C. Bell, 606 Hibernia Bank & Trust Co. Bldg., New Orleans. (Recently mentioned.)

Md., Baltimore.—Pier.—Chesapeake Steamship Co., Light and Lee Sts., awarded contract to Benjamin Glenn, 2300 East Baltimore St., Baltimore, to rebuild wharf property at Pier 18; improvements will consist of new front along entire wharf, over which will be constructed two waiting-rooms, one 78x60 feet and other 45x16 feet; from these rooms there will be covered overhead passenger walkway to each of steamers.

Md., Salisbury.—Harbor Improvements.—Salisbury Realty Co. awarded contract, recently reported, to French Dredging Co. of Norfolk, Va., at about \$28,000 to dredge 80-foot channel, 10 feet deep, beginning at Camden Ave. bridge and connecting with east fork of Wicomico River; channel will extend through 50 acres of land and will provide about 4000 feet of wharf-front property to be sold to manufacturers; dredging has begun; after filling up meadow land company will have about 46 acres of land, which will be laid out in streets and used for building purposes.

Okla., Oklahoma City.—Spillway.—Park Commissioners awarded contract to Illinois Concrete Machinery Co., Buda, Ill., at \$300 to construct spillway of dam for lake in Northeast Park; lake for which spillway acts as outlet covers 60 to 90 acres; over spillway, where lake empties, bridge will be constructed, on which boulevard of parkway will pass.

Va., Norfolk.—Retaining Wall.—E. Cross' Sons of Norfolk are lowest bidders for construction of proposed retaining wall on both sides of the Hague and on Olney Road; will consist of two rows of piles, capped with cement, on which three layers of stone will be placed; steps will be on both sides of Fairfax and Pembroke Aves. and landing at Olney Rd.; appropriation, \$28,500.

Va., Richmond.—Wharf and Bulkhead.—Committee on Improvement of James River authorized that bids be invited until July 5 for construction of public wharf and bulkhead along water front from Gillie's Creek to Nicholson St. according to plans and specifications prepared by Charles E. Bolling, City Engineer; \$20,000 appropriated. (Recently mentioned. See "Machinery Wanted.")

W. Va., Wheeling.—Dam.—Ohio River Construction Co., Evansville, Ind., has contract at \$39,029 for completing unfinished work on Government dam No. 13.

MISCELLANEOUS ENTERPRISES

Ala., Mobile.—Automobiles.—Lindsey Bros. Automobile Co. incorporated by James R. Lindsey, William H. Lindsey and Samuel Pounce.

Fla., Jacksonville.—Poultry Farm.—Lackawana Spring & Hotel Co., J. A. Hollomon, president, will establish poultry farm; plans erecting 25,650 feet wire fencing and 2562 cypress posts; install 188 pairs 10x12-inch window lights, etc.; also erect two laying-houses, each 625x123 feet; brooder-house, 625x122 feet, etc.; incubator building to be two stories high, lower story being of concrete; feed building, 20x50 feet, will contain gasoline engine and feed mills; understood many contracts have been awarded; cost of poultry farm, \$15,000; other improvements, \$50,000.

Ga., Brunswick.—Construction.—Glynn County Construction Co. incorporated with \$10,000 capital stock by Albert Fendig, L. T. McKinnon, A. M. Way and others.

Ky., Frankfort.—Publishing.—Legislative Digest Publishing Co. incorporated with \$5000 capital stock by Hubert Vreeland, A. R. Dunlap and Robert Higdon.

Ky., Hopkinsville.—Grain Elevator.—Christian County Elevator & Warehouse Co. incorporated with \$3000 capital stock by T. W. Blakey, R. H. Holland, John Hill and others.

Ky., Louisville.—Amusement.—Fresh Air Amusement Co. incorporated with \$2000 capital stock by James W. Guest, John F. Smiley, Verney Sanders and others.

Ky., Louisville.—Printing.—Royal Printing Co. incorporated with \$3000 capital stock by Jacob Haager, W. H. Price and W. P. MacDonald.

Ky., Madisonville.—Publishing.—Journal Publishing Co. incorporated with \$10,000 capital stock by James H. Young, Ed. L. Young and Gordon B. Hall.

Md., Baltimore.—Building Material.—Sling-luff Supply Co., 64 Gunter Bldg., incorporated with \$12,000 capital stock by Horace Sling-luff, Horace Slingluff, Jr., and Frank S. Whitman; will continue established business.

Md., Cumberland.—Police-Patrol System.—City contemplates installation of police-patrol system; Theo. A. K. Hummelshime, Fire and Police Commissioner. (See "Machinery Wanted.")

Miss., Covington.—Morgan Company incorporated with \$10,000 capital stock by S. M. Thomason, Mrs. B. W. Morgan and others.

Miss., Corinth.—Printing.—Panchrome Printing Press Co. awarded contract to L. C. Brakeman, Corinth, for erection of plant; 25x100 feet.

Miss., Meridian.—Paint, Mantels, etc.—Perry Paint & Mantel Co. incorporated with \$10,000 capital stock by W. T. Perry, E. S. Bostick and C. M. Rubush.

Mo., Carthage.—Garage.—Owners' Garage Co. incorporated with \$5000 capital stock by W. R. Caulkins, Fen B. Clark, Albert L. Caulkins, etc.

Mo., Kansas City.—Engineering.—Western Engineering & Construction Co., 417 Kemper Bldg., recently reported incorporated with \$2000 capital stock, has elected M. P. Connor president-manager, W. F. Zumburum secretary, Chas. Connor treasurer; will erect building; Mr. Connor will have charge of construction.

Mo., Kansas City.—Printing.—Empire Printing Co. incorporated with \$6000 capital stock by Robt. T. Groggin, R. E. Anderson, E. A. Fuller and others.

Mo., St. Louis.—Engraving.—Wythe Engraving Co. incorporated with \$5000 capital stock by William J. Wythe and others.

Mo., St. Louis.—Steam Laundry.—Work & Service Steam Laundry Co. incorporated with \$15,000 capital stock by E. E. Latta, S. R. Hord and M. S. Fuqua.

N. C., Charlotte.—Mill Supplies.—Mill Power Supply Co., recently reported incorporated with \$25,000 capital stock, has elected W. R. Connell, president-manager; E. C. Marshall, secretary.

N. C., Weldon.—Electrical Heating Device.—Success Novelty Co., recently reported incorporated, has elected T. M. House president, James E. Kennedy vice-president, Geo. C. Green secretary-treasurer; will handle electrical heating device.

N. C., Wilmington.—Grain Elevator.—Boney & Harper Milling Co. will erect concrete grain elevator; capacity 60,000 bushels.

S. C., Columbia.—Plumbing.—Columbia Plumbing & Metal Co. incorporated with \$5000 capital stock by H. B. Chapman and M. H. Kemme.

Tenn., Blountville.—Amusement Park.—Island Park Co. incorporated with \$4000 capital stock by W. S. Bare, W. D. Lyon, J. P. Worely and others.

Tenn., Chattanooga—Automobiles.—Lookout Automobile Co. incorporated by Tom Cawood, Sam Erwin, W. B. Cleage and others.

Tex., Dallas—Nursery.—Lang Floral & Nursery Co., recently reported incorporated with \$64,000 capital stock, will establish plants at Dallas and McKinney to handle cut flowers and nursery stock; main office, 299 Main St., Dallas; install boilers for greenhouses; Otto Lang, president.

Tex., Dallas—Distilled Water.—H. L. Dreyer, Denver, Col., will establish distilled-water plant; capacity, 40 gallons an hour; probably operate as Dallas Distilled Water Co.

Tex., Lockney—Elevator.—Cobb & Elliott, John Kendrick, manager, will establish grain elevator.

Tex., McKinney—Nursery.—Lang Floral & Nursery Co. will establish plant. (See Dallas, Tex.)

Tex., Velasco.—Velasco Fish & Oyster Co. incorporated with \$60,000 capital stock by J. E. Hooper, S. H. Hudgins and Robert Frazier.

Va., Eastville—Oysters.—Wisher Oyster Co. incorporated with \$15,000 capital stock; A. E. Wisher, president; C. W. Holland, vice-president; T. B. Smith, secretary.

Va., Gordonsville—Poultry Farm.—Gordonsville Poultry Farm incorporated with \$20,000 capital stock; C. J. O'Connell, president; N. A. Linney, vice-president; W. S. Rogers, secretary-treasurer.

Va., Norfolk—Stock Farm.—Virginia Stock Farm Co. organized with \$25,000 capital stock by L. J. Upton, T. S. Southgate, Isaac Oakley and others; establish stock farm, erect pens, etc.

Va., Roanoke—Steam Laundry.—Wet-Wash Steam Laundry Co. incorporated with \$5000 capital stock; L. J. Hess, president; J. M. Gambill, vice-president; E. E. Hess, secretary-treasurer.

Va., Petersburg—Nursery.—Arrowfield Nursery Co. incorporated with \$25,000 capital stock; W. N. Roper, president; Edith M. Hutt, vice-president; W. N. Hutt, secretary-treasurer.

Va., Richmond—Undertaking.—Isham Mann Company incorporated with \$5000 capital stock; Isham Mann, president; J. C. Smith, vice-president; J. C. Robertson, secretary-treasurer.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Agricultural Implements.—H. S. Matthews, vice-president of Alabama Consolidated Coal & Iron Co., is reported as interested in establishment of plant for manufacturing lap bale cotton presses, hay presses, etc.; cost \$200,000.

Ala., Birmingham—Coal Briquettes.—Standard Fuel Co. will establish plant to manufacture soft-coal briquettes; capacity 300 to 500 tons.

Ark., Fort Smith—Waterproofing.—Finks Waterproofing Co. changed name to Finks Manufacturing Co., and increased capital stock from \$5000 to \$25,000.

Ark., Weiner—Rice Mill.—Weiner Rice & Mill Co. organized with \$75,000 capital stock by James E. Parr, A. C. Broadway and T. W. Altman, all of Jonesboro, Ark.; will establish rice mill.

Fla., Pensacola—Candy and Crackers.—Merchants' Candy & Cracker Manufacturing Co., A. J. Pursley, Jr., will open bids September 1 for erection of factory building recently noted; fireproof construction; cost \$30,000 to \$40,000. (See "Machinery Wanted.")

Ga., Augusta—Brooms.—Augusta Broom Works has plans by E. H. Mobley, Augusta, for factory building recently noted; 100x40 feet; ordinary construction; cost \$5000; Mr. Mobley will have charge of construction; no further machinery needed; daily capacity 60 dozen brooms.

Ky., Lexington—Distillery.—James E. Pepper & Co. will practically rebuild plant; increase mashing capacity to 1000 bushels of grain daily; install new fermenters, stills, pumps, boilers, etc.; construct railway spur into property; place steel grain bins into position for filling direct from cars; will dry slop and convert into stock food.

Ky., Louisville—Dental Supplies.—Birmingham Dental Laboratory & Manufacturing Co. incorporated with \$10,000 capital stock by H. G. Gill of Birmingham, T. M. Crutcher and D. Hoke, both of Louisville, Ky.

Ky., Owensboro—Briquettes.—Bituminous Rock Products Co., J. S. Cottrell, secretary, is interested in establishment of plant to manufacture briquette coal from screening, etc.; company is in coal belt, and has asphalt deposit. (See "Machinery Wanted.")

La., Loreauville—Sugar Mill.—Marla Central Factory (A. Gonsoulin) is repairing plant, and will erect additional mill.

La., New Orleans—Mailbags.—J. L. Adam is organizing company to manufacture patented mailbag device.

La., St. Mary's—Sugar Mill.—John J. Welder, Victoria, Tex., purchased and will reconstruct sugar mill.

Md., Baltimore—Undertakers' Supplies, etc. Douglas Manufacturing Co., 800 Hillen St., incorporated with \$10,000 capital stock to manufacture casket and undertakers' supplies; A. C. Schmidt, president and treasurer; J. Cherogl, vice-president; D. G. Douglas, secretary and manager.

Md., Baltimore—Foods.—Pure Food Process Co. incorporated with \$150,000 capital stock by William Kleinle, 803 Calvert Bldg.; E. Madison Mitchell, 1201 W. Fayette St., and Jacob M. Raffel, 14-18 South Greene St.

Md., Baltimore—Banking Stationery, etc.—Falconer Company, 5-7 North Gay St., awarded contract to J. O. Hederman, 1601 East Lafayette Ave., for erection of plant at Gay and Water Sts.; steel, concrete and brick construction; granite and limestone trimmings; 70x125 feet; five stories; 240 windows of Tabor patent type; electric lights; steam heat; elevators; electric-light and power plant; each machine operated by direct-connected electric motor; shower baths with automatic water heater; roof tank for 15,000 to 20,000 gallons of water for automatic sprinkler system; floor walls and roof of concrete or brick; plans by and construction under supervision of Parker, Thomas & Rice, 1109 Union Trust Bldg.; Charles L. Reeder, Equitable Bldg., consulting engineer, all of Baltimore. (Previously noted.)

Md., Baltimore—Gas Economizer.—K-L Company incorporated by Robert M. Lovell, Henry Kolb, Maple Ave., Overlea, Md., and Levin Lake, Jr., 2906 North Calvert St., Baltimore.

Md., Centerville—Gas Plant.—Homer J. Smith, vice-president of National Light & Power Co., Cleveland, O., applied for franchise to establish gas plant.

Miss., Natchez—Creamery.—Natchez Creamery Co., recently reported incorporated with \$30,000 capital stock by J. F. Foard and others, will install refrigerating machinery, separators and other machinery for butter, cream, etc.; private contract awarded for erection of stables, barns, etc.; officers not yet elected; address machinery proposals to J. F. Foard.

Mo., Kansas City—Radium Spray.—Radium Spray Co. incorporated with \$3000 capital stock by A. G. Parker, George W. Wilhelm, T. C. Smith and others.

Mo., Sedalia—Disinfectant.—American Disinfecting Co. incorporated with \$30,000 capital stock by S. W. Van Dyne, C. E. Ilgenfritz and V. D. Van Dyne.

Mo., St. Louis—Tools.—Fayette R. Plumb, Inc., Bridesburg, Philadelphia, Pa., awarded contract to John G. Brown of Philadelphia to erect buildings for plant; 16 buildings, planned for doubling in future; 13 for manufacturing, 1 for office and laboratory, 1 for power-house and machine shop and 1 for employees' steel lockers and toilet facilities; brick walls, steel roofs and roof trusses covered with concrete or slow-burning material; fire walls separating all departments in which wood will be used or stored; steel storage-house will be two stories high, of reinforced concrete, with brick walls; plant site covers 13 acres; 14 buildings to be one story high, mostly 100x60 feet; two will be two stories high; total floor space, 78,000 square feet; brick, concrete columns, slag roof, steel trusses, pivoted glass windows six feet high at top of all walls; machinery will include power plant and equipment for manufacturing tools and cutlery; it is reported total cost will be \$1,000,000. (Previously announced as to be built.)

Mo., St. Louis—Showcases, Mirrors, etc.—H. Pauk & Sons Manufacturing Co. awarded contract for erection of factory building; three stories; 54x130 feet.

Mo., Valley Park—Stove Polish, etc.—Silver Gloss Stove & Shoe Polish Co. (not Silver Glass Polish Co., as recently noted) incorporated with \$50,000 capital stock; will manufacture stove polish; Joseph Bailey, secretary.

N. C., Charlotte—Gas Machines.—Automatic Gas Machine Co. incorporated with \$50,000 capital stock by W. D. Rock, John T. Vann and others; manufacture Speer automatic gas machines.

N. C., Durham—Bags.—Golden Belt Manufacturing Co. will install machinery for manufacturing and printing tobacco bags and pouches in \$30,000 addition; detailed recently.

N. C., Wilmington—Paper.—Crocker Wood Pulp Paper Co. (previously reported incorporated) has secured location for plant near Wilmington; has options on several thousand

acres wooded and timbered lands; no improvements yet made; plans not announced; J. A. Currie, president; W. H. Crocker, general manager, both of Ridgway, Pa.; J. W. Yates, vice-president; John C. Short & Son, 51 Liberty St., New York, also interested.

Okla., Bartlesville—Glass.—R. W. Lynch, Columbus, O., leased Great Western Co. glass plant; will repair, install machinery and operate.

Okla., Oklahoma City—Fire Escapes.—New Wenig Fire Escape Co. incorporated with \$5000 capital stock by John W. Wenig, R. S. Jones and S. D. Townsend.

S. C., Marion—Patents.—Millsaps Company incorporated with \$25,000 capital stock by D. W. Millsaps, J. L. Wheeler, William Stackhouse and W. F. Stackhouse.

S. C., Smoaks.—Berea Mercantile & Manufacturing Co. incorporated with \$3500 capital stock by J. C. Goodwin, D. T. Strickland and J. R. Linder.

Tex., Corpus Christi—Overalls.—F. T. Howells of Memphis, Tenn., contemplates establishment of overall factory.

Tex., El Campo—Creamery.—E. H. Koch, representative, is interested in establishment of creamery; cost \$5000.

Tex., El Campo—Creamery.—Creamery & Dairy Co. of San Antonio, Tex., purchased Isaac Weaver Ice Cream Works; will install additional machinery.

Tex., San Antonio—Automobile Trucks.—Commercial Motor Car Co. will be name of company recently noted to establish plant for manufacture of commercial motor trucks; awarded contract to James L. Glass Construction Co., San Antonio, for erection of reinforced concrete building to cost \$50,000; plans by F. E. Lamb, Bowling Green, O.; cost of iron and woodworking machinery approximately \$20,000; no bids on machinery equipment; Z. Z. Brandon, president; B. A. Gramm, vice-president; L. J. Brandon, secretary-treasurer; J. L. Glass, assistant secretary. (See "Machinery Wanted.")

Tex., Sugarland—Pulp and Paper.—Sugarland Pulp & Paper Co. incorporated with \$100,000 capital stock by Alex. Peddie, E. C. Smith and E. G. Goodell.

Tex., Waco—Brewery.—George E. Snyder, vice-president and general manager Memphis (Tenn.) Brewing & Malting Co., will establish brewery and cooperage plant; cost \$300,000.

Va., Richmond—Paper.—Standard Paper Manufacturing Co. has plans by Carneal & Johnston, 9th and Main Sts., Richmond, for proposed building; two stories; 80x200 feet; mill construction; brick; steam heat; cost \$15,000.

Va., Richmond—Novelties.—Novelty Company of Virginia incorporated; A. A. Pizzini, president; Andrew Pizzini, Jr., Vice-president.

Va., Danville—Lubricating Device.—Aden Manufacturing Co., L. B. Conway, president, recently reported chartered (under "Woodworking Plants") with \$50,000 capital stock, will handle patented device for lubricating vehicles; will not manufacture.

Va., Marion—Tanning Extract.—Marion Extract Co. (recently reported incorporated with \$60,000 capital stock to manufacture tanning extract) will erect main building 75x100 feet; engine-house, 40x75 feet; barrel-house, 40x100 feet; two leech-houses, each 50x250 feet; chipper shed, 50x10 feet; pan-house, 40x60 feet; machine shop, 60x100 feet; install 12 200-horse-power boilers and use 100 cords of wood daily; W. H. Teas, president, Ridgeway, Pa.

W. Va., Bluefield—Gas.—Bluefield Gas & Fuel Co. incorporated with \$150,000 capital stock by Wm. E. Ross and others to establish plant and lay mains for manufacture and conveyance of coal gas for illuminating and heating; daily capacity 100,000 or more cubic feet; probably three miles eight-inch, four miles six-inch and five miles four-inch mains; also contemplates supplying gas to Graham; has acquired 50-year franchise in Bluefield; will at once ask construction estimates. (See "Machinery Wanted.")

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, SHEDS, ETC.

Ark., Argenta.—St. Louis Southwestern Railway, M. L. Lynch, chief engineer, Tyler, Tex., has begun grading preparatory to construction of proposed shops on East Arkansas Ave.; buildings will include 10-stall engine-house, coal chute, coach sheds and several minor sheds; estimated expenditure \$1,000,000.

Ga., Augusta—Augusta & Aiken Railway will erect third story to terminal building at Jack and Telfair Sts.; cost \$12,000.

N. C., Spencer.—Southern Railway, D. W.

Lum, chief engineer, Washington, D. C., awarded contract to John P. Pettyjohn & Co., Lynchburg, Va., to erect boiler shop; 100x208 feet; two stories; brick and steel; concrete foundation; estimated cost \$300,000, including equipment; other buildings to be erected will be blacksmith shop, oilhouse and store and office building. (Recently mentioned.)

Tex., Galveston.—Galveston-Houston Electric Co. purchased site, it is reported, on which to erect reinforced concrete car barns and machine shops to cost \$50,000.

Tex., Yoakum.—San Antonio & Aransas Pass Railway, J. S. Peter, general manager, San Antonio, Tex., contemplates erection of two shop buildings; one will be 100x150 feet and used for coach shop, and other 80x100 feet and used as mill; about \$30,000 worth of machinery will be installed.

ROAD AND STREET WORK

Ala., Evergreen.—Conecuh county voted \$100,000 bond issue for road improvements. Address County Commissioners.

Ark., Forrest City.—City contemplates paving five miles of concrete sidewalks. Address The Mayor.

Ark., Little Rock.—Commissioners of South Center St. Improvement District (H. L. Remmel and others) awarded contract to Memphis (Tenn.) Asphalt & Paving Co. for resurfacing Center St. from 12th to 18th St.

Ark., Little Rock.—Commissioners of West 14th St. Improvement District, Herbert Turner, secretary, will open bids June 27 for paving 14th St.

Ark., Stuttgart.—City Council passed ordinance providing for paving of Main St. Address The Mayor.

Fla., Fernandina.—City awarded contract to Southern Paving & Construction Co., Chattanooga, Tenn., to pave Center St.; G. L. Baltzell, City Clerk. (Recently mentioned.)

Fla., Pensacola.—City voted issuance of \$150,000 of bonds for street paving. Address The Mayor. (Recently mentioned.)

Fla., West Palm Beach.—Palm Beach Farms Co. awarded contract to C. T. McCrimmon & Co., Miami, Fla., to construct rock road from Boynton to company's property; distance, five miles. (Recently mentioned.)

Fla., West Palm Beach.—Palm Beach county will grade and surface with rock road from Mangonia to Stuart; bids will be opened July 5 to include construction of all necessary bridges by bidder, except bridge across Loxahatchee River at Jupiter; R. H. Rousseau, chairman pro tem. of County Commissioners. (See "Machinery Wanted.")

Ga., Atlanta.—R. M. Clayton, City Engineer, will invite bids for paving Marietta St. from Foundry St. to North Ave.

Ga., Augusta.—City receives bids June 23 for paving on Ellis St. and Barum and Cotton Als.; vitrified brick; about 7000 square yards; Nisbet Wingfield, City Engineer and Commissioner Public Works. (Recently mentioned.)

Ga., Augusta.—City Council opened bids June 23 for paving Ellis St. from 7th to 9th St.; Burum's or Compress Al. from Reynolds to Bay St.; Cotton Al. from 8th St. to Compress Al.; vitrified brick; about 6000 yards; Nisbet Wingfield, City Engineer and Commissioner of Public Works. (Recently mentioned.)

Md., Towson.—Baltimore county will improve section of Valley Rd., Section 6, between Jenkins' entrance and Rogers Ave., distance of .51 miles; E. Stanton Bosley, secretary of Baltimore County Highways Commission. (See "Machinery Wanted.")

Ky., Lexington.—Fayette County Turnpike Committee awarded contract to Home Construction Co. of Lexington at \$34,000 to resurface and reconstruct roads.

Ky., Maysville.—Kelly Bros., Portsmouth, O., were awarded contract at \$25,000 for paving 2d and Market Sts.

La., Mansfield.—City contemplates building five to six miles cement sidewalk; F. Kavanaugh, Street Commissioner. (Recently noted.)

Md., Baltimore.—Board of Awards awarded contract at 76 cents per square yard to P. Flanagan & Sons, 120 East Lexington St., Baltimore, to macadamize 26th St. from Eastern Ave. to Sydenham Hospital.

Md., Baltimore.—Realty Securities Corporation, 301 St. Paul St., awarded contract to William P. Killian, 422 Lorraine Ave., Baltimore, for paving sidewalks on Duval Ave., Forest Park, between Garrison and Mt. Holly Aves., and to United Engineering & Construction Co., Sexton Bldg., Baltimore, for grading Allendale Rd., Forest Park.

Md., Baltimore.—City will grade, curb and pave with sheet asphalt, asphalt blocks, vitrified blocks or bitulithic Laurens St. from Park Ave. to Bolton St.; bids to be opened June 29; B. T. Fendall, City Engineer. (See "Machinery Wanted.")

Md., Belair.—Harford county will grade and macadamize 3½ miles of Post Rd. between Havre de Grace and Aberdeen; bids opened June 20; W. A. Wheeler, County Clerk.

Md., Havre de Grace.—City contemplates issuing \$27,000 bonds for street macadamizing in addition to \$30,000 issued. Address The Mayor.

Miss., Grenada.—City will pave streets by contract; concrete curbing around public square. Address The Mayor.

Miss., Tupelo.—Supervisors of Third district of Lee county will open bids July 6 for construction of about 25 miles of roads; plans and specifications on file in office of Supervisors; bond issue of \$100,000 authorized; D. W. Robbins, Road Commissioner. (Recently mentioned. See "Machinery, etc., Wanted.")

Mo., St. Joseph.—Board of Public Works awarded contract to Young Bros. Construction Co. of St. Joseph at \$1.37½ per square yard to pave Main St. with brick.

N. C., Elizabeth City.—Street Improvement Committee, D. M. Jones, chairman, will receive bids until July 5 for paving streets recently noted. (See "Machinery Wanted.")

N. C., Greensboro.—City will lay concrete sidewalks; bids opened June 22; John L. King, chairman Street Commission.

N. C., Hickory.—City awarded contract at \$55.488 to Hart, Abbe & Co. of Hickory to construct streets and cement sidewalks.

Okl., Duncan.—Stephens county will vote in November on issuance of \$25,000 to \$35,000 of bonds for road improvements. Address County Commissioners.

Okl., Oklahoma City.—City will pave with petrolithic pavement, grade, etc., 31st, 32d, 33d, Hill, Eubank and 35th Sts., etc.; bids to be opened July 5; Bob Parman, City Clerk. (See "Machinery Wanted.")

Okl., Enid.—Board of Affairs invites bids for construction of East End Rd.

Okl., Stillwater.—College committee of State Board of Agriculture will construct 300 feet of sidewalks five feet wide; bids to be opened June 27; J. P. Connors, president of board. (See "Machinery Wanted.")

Tenn., Chattanooga.—Board of Public Works, H. F. Van Dusen, chairman, received bids June 21 for improvements to Market, Chestnut, Main, 9th, Wyatt and Spruce Sts.

Tenn., Memphis.—City will pave Cooper St. with asphalt; J. H. Weatherford, City Engineer, is preparing estimates; other streets for which estimates are being prepared include Waldran Blvd. with asphalt, East St. with asphalt or brick, Monroe Ave., Anderson, Cleveland and Porter Sts., etc.; ordinances are being considered for paving Jefferson Ave. at estimated cost of \$22,000; Bellevue Blvd., cost \$25,000; Central St., cost \$20,000; Lamar St., cost \$15,000; etc.

Tenn., Memphis.—Turnpike Commission, J. F. Williams, chairman, plans construction of road 121 miles long to encircle county.

Tenn., Nashville.—Board of Public Works will soon award contracts for paving Alley 71 between Fifth and Sixth Aves., requiring about 900 square yards of granite blocks, and same alley from Union to Cedar St., requiring about 1000 square yards of vitrified blocks; also for paving Broadway viaduct, requiring about 5400 square yards of vitrified brick blocks.

Tenn., Ripley.—City contemplates laying concrete walks in residence section. Address The Mayor.

Tenn., South Pittsburg.—City contemplates street improvements; will grade and macadamize road to Richard City and construct concrete arch across sewers on Cedar Ave. Address The Mayor.

Tex., Alvin.—City voted issuance of \$12,000 of bonds for street improvements. Address The Mayor. (Recently mentioned.)

Tex., Aransas Pass.—City will vote on issuance of \$15,000 of bonds for street paving. Address The Mayor.

Tex., Atlanta.—Cass county, Precinct No. 7, voted \$40,000 bond issue (recently noted) for road improvement; Cass County Industrial League, Martin Allday, secretary, wishes correspondence with engineers and contractors. (See "Machinery Wanted.")

Tex., Coleman.—City awarded contract for grading principal streets; contract calls for concrete culverts at all crossings and concrete ditches on each side of streets. Address The Mayor.

Tex., Coleman.—City awarded contract to

Coulson & Davis of Coleman to pave, curb and gutter Commercial Ave.; paying of crushed stone, concrete and gravel; concrete gutters; use steam roller.

Tex., Dallas.—City awarded contract to Texas Bitulithic Co. of Dallas to pave Reiger and Carroll Aves.; contract price, \$2.30 per square yard, making cost of first-named street \$10,988 and of last-named \$4371.64; J. B. Winslett, City Secretary. (Recently mentioned.)

Tex., El Paso.—City awarded contract to Texas Bitulithic Co., Dallas, Tex., for paving on Missouri St. from North Oregon St. to Cotton Ave.; about 6500 feet; estimated cost \$67,006.87; material supplied by contracting company; F. H. Todd, City Engineer.

Tex., Ennis.—Ennis district of Ellis county voted issuance of \$225,000 of bonds for road improvements. Address District Commissioners.

Tex., Port Lavaca.—City voted bond issue for sidewalk improvements. Address The Mayor.

Tex., Galveston.—Galveston county will construct sidewalk and curbing on Galveston county seawall boulevard from Strand (Ave. B) to Ave. H; will require 4000 square yards sidewalk, 2300 linear feet concrete curbing and 2350 linear feet concrete retaining curb; John M. Murch, County Auditor. (Recently mentioned. See "Machinery Wanted.")

Tex., Houston.—Magnolia Park Land Co., 912 Texas Ave., will grade, shell and drain Brays Blvd. in Magnolia Park; bids to be opened June 28. (See "Machinery Wanted.")

Tex., Marlin.—City will award contract within 60 days for paving six blocks in business section, recently noted; bids not yet asked; F. S. Heffner, Mayor.

Tex., Rotan.—City will grade and gravel 26,756 square yards of streets; bids to be opened July 1; J. C. Kirby, Mayor. (See "Machinery Wanted.")

Tex., Shiner.—If bond issue of \$10,000 (recently noted) is carried, city will expend \$2000 on street improvements. E. J. Merrem may be addressed.

Tex., Sourlake.—Precinct No. 2 of Hardin county voted issuance of \$35,000 of bonds for road improvements. Address Commissioners of Road Precinct No. 2.

Va., Boykins.—City will construct 2000 yards granolithic sidewalks; bids to be opened June 25; Guy T. Horner, chairman street committee. (See "Machinery Wanted.")

Va., Chatham.—City contemplates voting in July on issuance of \$10,000 of bonds for macadamizing Main St. and enlarging school building. Address The Mayor.

Va., Lexington.—City voted issuance of \$30,000 of bonds for streets and roads. Address The Mayor.

Va., Lexington.—City voted issuance of \$3000 of bonds for street and road improvements. Address The Mayor.

W. Va., Beckley.—City contemplates issuing \$40,000 of bonds for street improvements. Address The Mayor.

W. Va., Marlinton.—Pocahontas county will construct road from pike on top of Droop Mountain to turn on Jacob Rd., in Little Levels district; distance 225 rods; bids opened June 21; George W. Duncan, County Roads Engineer.

SEWER CONSTRUCTION

Fla., Fort Myers.—City will vote August 16 on issuance of \$50,000 of bonds for construction of sewer system. Address The Mayor. (Recently mentioned.)

Fla., Pensacola.—City voted issuance of \$100,000 of bonds for extension of sewer system. Address The Mayor. (Recently mentioned.)

Md., Baltimore.—Realty Securities Corporation, 301 St. Paul St., awarded contract to United Engineering & Construction Co., Sexton Bldg., Baltimore, for construction of sewers in Allendale Rd. and Duvall Ave., Forest Park.

Md., Frederick.—City awarded contract to Coblenz & Kilpp, Frederick, for construction of about 1000 feet storm-water sewer recently noted; materials purchased.

Md., Centerville.—City has engaged Robert B. Morse, Palatka, near Garrison Ave., Baltimore, Md., as engineer in charge of constructing sewer system. (Bond issue recently reported voted.)

Md., Glenburnie.—Maryland National Guard, recently noted to construct sewage-disposal plant on Saunders Rifle Range, will expend \$1500 to install hydrolytic tank and sand filters; work under supervision of J. W. Shirley, chief engineer topographical survey, city hall annex, Baltimore.

Md., Towson.—Courthouse Commission awarded contract at \$4475 to Wm. R. Rothrock & Co., 23-25 Light St., Baltimore, Md., to construct sewage-disposal plant.

Okl., Oklahoma City.—City will construct lateral sewer in Winan's Highland Terraced Addition, Winan's Second Addition, University Addition, and portions of Central Park, Ross-Mann, Grand View and Central North-west Additions; bids to be opened July 5; Bob Parman, City Clerk. (See "Machinery Wanted.")

S. C., Charleston.—City will construct sewage receiving tank, pump pit and appurtenances, including vertical centrifugal pumps and electric motors with controlling devices; bids to be opened July 11; J. H. Dingle, City Engineer. (See "Machinery Wanted.")

Tenn., Knoxville.—Board of Public Works awarded contract to Long & Price of Knoxville to construct sewers on Maskall Al., Depot St. and East Church Ave.

Tenn., Union City.—City is having plans prepared by C. H. Jenks of Fayette, Miss., and St. Louis, Mo., for construction of sewer system; bids to be asked within 45 days.

Tex., Amarillo.—City will open bids June 28 for construction of sanitary sewers; work will consist of 11,100 feet 15-inch, 8155 feet of 12-inch and 39,835 feet 6-inch diameter sewer pipe; \$40,000 bond issue voted; E. L. Dalton, engineer, Dallas, Tex. (Recently mentioned. See "Machinery Wanted.")

Tex., Houston.—F. L. Dormant, consulting engineer, Houston, will prepare plans and specifications for storm-water sewer on Calhoun St.

Tex., Houston.—Street and Bridge Department will construct storm sewer from Shipman St. to Buffalo Bayou, draining land west of Sam Houston Park; length 400 feet; 24-inch pipe.

W. Va., Adamston.—City granted franchise to John C. Southern to construct and operate sewer system.

TELEPHONE SYSTEMS

Ky., Burnetts.—White Oak Telephone Co. incorporated by J. H. Barner, Kirk Snowden and B. Jasper.

Ky., Clay City.—Editor Burgher of Clay City Times purchased telephone franchise and will probably organize company to extend line.

Ky., Eminence.—Henry County Telephone Co. increased capital stock from \$100,000 to \$150,000.

Miss., McHenry.—Cumberland Telephone & Telegraph Co., Leland Hume, general manager, Nashville, Tenn., will establish telephone exchange; W. E. Maxey, superintendent of construction, Biloxi, Miss.

Ky., Mayfield.—Clark River Telephone Co. increased capital stock from \$3000 to \$6000.

La., Clear Lake.—Western Electric Telephone Co. purchased controlling interest in Clear Lake Independent Telephone Co. and is planning to improve system.

La., Sugartown.—Company organized with \$10,000 capital stock; W. B. Wellborn, president; M. A. Shirley, vice-president; C. M. Green, secretary; S. J. L. Andrews, treasurer; will establish telephone system, with lines to Bannister, Kipling and Dry Creek.

Mo., Greenfield.—Mutual Telephone Co. incorporated with \$20,000 capital stock by J. C. Schrouse, J. F. Wetzell, R. S. Long and others.

Mo., Cuba.—Cuba Telephone Co. incorporated with \$8000 capital stock by A. M. Benton, C. E. Dunkelberg and C. R. Fitch.

S. C., Anderson.—Flat Rock Telephone Co. organized; John Howard, president; Lawrence Keys, manager; will construct telephone line eight miles long.

Tenn., Livingston.—Overton Branch of Home Telephone System incorporated with \$5000 capital stock by B. L. Specks, J. A. Hargrove, W. J. Chilton and others.

Tex., El Paso.—Tri-State Telephone Co. will construct toll lines east to Dallas, Tex., and west to California; awarded contract for eight carloads of copper wire.

Tenn., Memphis.—Cumberland Telephone & Telegraph Co., Leland Hume, general manager, Nashville, Tenn., will erect exchange on Walker Ave. near Willoughby St.; underground service.

Va., Norfolk.—Southern Bell Telephone & Telegraph Co. will consolidate with Southern States Telephone Co. and expend \$300,000 for extending and improving systems at Norfolk & Portsmouth, Va.; will erect building on Plume St., install \$70,000 switchboard, interior block distribution to carry wires through interior walls of large buildings, etc.

Va., Northfork.—Northfork & Bradshaw Telephone Co. is arranging to complete con-

struction of telephone line; A. A. Richardson, general superintendent of construction, Lafayette, Va.

Va., Salem.—Virginia & Tennessee Telephone Co. will construct telephone line from Lafayette to Bradshaw, up North Fork to Shawsville, by way of State Hill Tunnel, where it will connect with main line.

Va., Scottsville.—Scottsville Telephone Co. (recently reported incorporated with \$10,000 capital stock) will construct telephone line from Scottsville to Charlottesville, Va., and Fluvanna and Buckingham counties; W. S. Dorrier, president.

TEXTILE MILLS

Ala., Roanoke.—Cotton Cloth.—W. A. Handley Manufacturing Co. has begun erection of addition lately reported; two stories; install 120 looms; has 20,000 spindles.

Ga., Manchester.—Duck, etc.—Manchester Cotton Mills will build addition, as stated last week; install 108 additional looms; also extend cloth warehouse 50x100 feet; expend about \$40,000.

N. C., Concord.—Cotton Goods.—Roberta Manufacturing Co. incorporated with \$100,000 capital stock by P. M. Keller of Concord, John C. Rankin and S. M. Robinson of Lowell, N. C., and others.

N. C., Lumberton.—Hosery Yarns.—Jennings Cotton Mills will erect one-story brick structure; 131 feet by 463 feet 8 inches; also build steam power plant adjoining; all construction to cost about \$50,000; building work under company's direction; will install 3000 spindles; J. E. Shirrine, Greenville, S. C., is architect-engineer in charge. (Jennings company previously reported organized, etc.)

Okl., Clinton.—Hosery.—John W. Blackwelder of Frederick (Okl.) Knitting Mill telegraphs Manufacturers' Record he is not connected with recently reported Clinton mill.

Okl., Oklahoma City.—Bag Cloth, etc.—Oklahoma Bag and Cotton Mills chartered with \$1,000,000 capital stock by M. L. Berry of Oklahoma City; John T. Woodside and W. L. Gassaway of Greenville, S. C.; R. G. Gaines of Central, S. C., and F. D. Ross of Lawton, Okla.; will erect cotton-mill two stories high and 79x450 feet; bag plant one story high and 75x300 feet; power-house one story high and 50x140 feet, and reservoir with capacity of 3,000,000 gallons of water; all concrete construction; install 10,000 spindles, 300 looms, bag machinery, bleaching equipment, printing machinery and finishing plant; also erect 100 cottages for operatives; architect-engineer in charge, J. E. Shirrine of Greenville, S. C.; understood machinery contracts have been awarded and that building construction will begin at once; M. L. Berry to be president and general manager.

S. C., Catechee.—Sheeting.—Norris Cotton Mills Co. is considering installation of 234 automatic looms to replace plain looms; now has 218 automatic looms, etc. (Mentioned recently.)

S. C., Chester.—Cotton Cloth.—Wylie Mills will double present capital of \$150,000 and build addition to be equipped with looms; now has 20,100 ring spindles.

S. C., Florence.—Cotton Goods.—Florence Manufacturing Co. chartered with \$200,000 capital stock by J. Willard Ragsdale, John L. Barringer, E. M. Matthews and others.

S. C., Liberty.—Cotton Cloth.—Calumet Manufacturing Co.'s recently reported addition will be two stories high, 87x104 feet, and contain 200 looms driven by steam.

S. C., Simpsonville.—Print Cloth.—Simpsonville Cotton Mills recently reported addition will be two stories high, 132x250 feet, and contain 16,896 spindles and 400 looms, which have been ordered; plans to operate by electricity; two more warehouses and 50 cottages; mill and warehouse building contract awarded to Gallivan Building Co., Greenville, S. C.; architect-engineer in charge, J. E. Shirrine, Greenville, S. C. (Previously mentioned.)

S. C., Williamston.—Cotton Cloth.—John A. Hudgens of Pelzer, S. C., and associates will organize \$300,000 company to build cotton mill.

S. C., Williamston.—Print Cloth.—Williamston Mills contemplates doubling plant; present equipment 32,256 ring spindles and 816 looms; operated by steam and electricity.

Va., Alta Vista.—Cotton Cloth.—Alta Vista Cotton Mill Co. will erect two-story structure, 125x300 feet, one-story boiler and engine rooms and 50 cottages for operatives; all of brick; will install 13,000 spindles, 300 looms, electrical driving machinery, etc.; engineers in charge, Whitte & White of Charlotte, N. C. (Alta Vista company lately reported organized, etc., with A. C. Hutchison, Charlotte, N. C., as president.)

WATER-WORKS

Ala., Bessemer.—City granted franchise to Birmingham (Ala.) Water & Light Co. to furnish water and electric lighting; company proposes to construct dam across Warrior River. (Recently mentioned.)

Ark., Little Rock.—Arkansas Water Co. increased capital stock from \$50,000 to \$500,000.

Ala., Opelika.—City will vote July 14 on issuance of \$85,000 of bonds for construction of water-works and electric-light plant. Address The Mayor. (Election recently mentioned declared invalid.)

Ark., Blytheville.—City Council is considering construction of water-works.

Ark., Fort Smith.—City will extend water-works system; bids to be opened July 6. Address Board of Public Affairs. (See "Machinery Wanted.")

Ark., Imboden.—Dr. E. N. F. Sullivan, representing People's Bank, purchased and will improve Imboden Power & Light Co.'s plant; betterments will include extension of water mains. (See "Electric Light and Power.")

Ark., Paragould.—Improvement District No. 2 will construct water-works. Address J. R. Thompson, Mayor.

Ga., Donaldsonville.—City awarded contract. It is reported, for improvement of water-works. Address The Mayor. (Bond issue of \$20,000 recently reported voted for water-works improvement and electric-light plant.)

Ga., Lafayette.—City will have plans and specifications prepared by J. B. McCrary & Co., Atlanta, Ga., for water-works and electric plant.

La., Lake Charles.—Lake Charles Railway, Light & Water-works Co. (successors to Lake Charles Ice, Light & Water-works Co.) will make improvements to water-works; will install pumps of about 3,000,000 gallons per day capacity, and contemplates using electric motors for driving power; T. J. Bird, superintendent. (See "Machinery Wanted.")

La., Pollock.—City has completed arrangements for construction of water-works; power and supply will be furnished by J. E. Ball Lumber Co.

La., Winnfield.—City will lay additional water mains. Address The Mayor.

Md., Baltimore.—Board of Awards will open bids June 29 for furnishing materials and erecting pumping station for pipe-line system on South St. near Pratt St.; each bid to be accompanied by certified check for \$1000; drawings and specifications on file in office of Edward D. Preston, Building Inspector, City Hall. (Further facts recently mentioned.)

Md., Hancock.—City will open bids July 6 for construction of water-works recently noted; to include 300,000-gallon concrete reservoir, pumping station, filtration plant, two miles water pipe and sewer; cost \$25,000; plans by Penniman & Fairley, 411 Marine Bank Bldg., Baltimore; plans and specifications may be had of architects or from R. J. McCandlish, clerk, Hancock, upon deposit of \$10. (See "Machinery Wanted.")

Miss., Amory.—City will expend \$65,000 to install water-works and make improvements to electric-light plant; Solomon-Norcross Company, Atlanta, Ga., engineer in charge. (See "Electric Light and Power.")

Miss., Hazlehurst.—City awarded contract to G. Thompson Hallas, Hazlehurst, for construction of reinforced concrete reservoir recently noted; 40 feet diameter; 12 feet deep; 120,000 gallons capacity; also four-inch reinforced concrete wall on present brick reservoir; excavation contract let to J. J. Spitchley, Hazlehurst; total cost within \$2500.

Miss., Meridian.—City will construct storage reservoir covering about 65 acres; will require 140,000 cubic yards of earthwork. 500 cubic yards concrete, 100 creosote piles, 20,000 feet B. M. creosote lumber, five acres of clearing and grubbing; bids opened June 20; William F. Wilcox, C.E., general manager.

Miss., Oxyka.—City will issue \$30,000 of bonds July 14 for construction of water-works and electric-light plant previously noted; Xavier A. Kramer, engineer, Magnolia, Miss., submitted plans; Clinton Thompson, Mayor.

Mo., Malden.—Archer Roehm & Co., engineers, Malden, have prepared plans for water-works and electric-light plant; estimated cost, \$30,000; bids will soon be invited.

Mo., Nevada.—Nevada Water, Light & Traction Co. incorporated with \$350,000 capital stock by Henry C. Barker, William W. Selbert, Edward Willard and others.

Mo., Slater.—City voted issuance of \$27,500 of bonds for rebuilding water-works and electric-light plants; Burns & McDonnell,

engineers, Scarritt Bldg., Kansas City, Mo.

Okla., Cherokee.—City will open bids June 30 for extension of water-works and electric-light systems; Burns & McDonnell, engineers, Scarritt Bldg., Kansas City, Mo.; A. J. Titus, Mayor. (Recently mentioned. See "Machinery Wanted.")

Okla., Fort Sill.—E. R. Kerby, Lawton, Okla., has contract at \$14,568 to construct water-distributing system; Capt. David L. Stone, constructing quartermaster. (Recently mentioned.)

Okla., Kaw.—City contemplates voting on issuance of bonds for construction of water-works. Address The Mayor.

Okla., Kingston.—City is completing arrangements for construction of proposed water-works, electric-light system and ice plant; machinery ordered; wells sunk to depth of 500 feet; estimated expenditure, \$100,000. Address The Mayor.

Okla., Lawton.—City will expend \$100,000 of bond issue recently noted in completion of dam across Medicine Creek, about 12 miles from Lawton; dam now 20 feet high; \$100,000 to be used for purchase of lands for overflow; reservoir to cover 1123 acres land, all to be cleared and prepared for reservoir; \$40,000 to be expended for extension of water mains throughout additions to Lawton; W. R. Julian, City Clerk.

Okla., Oklahoma City.—Oklahoma Bag and Cotton Mills will construct 3,000,000-gallon reservoir. (See "Textile Mills.")

S. C., Columbia.—Board of Public Works will open bids July 2 for laying 2100 feet of 12-inch and 1200 feet of 6-inch water mains, with hydrants, recently noted; 12-inch main will furnish water supply for Glencoe Cotton Mills; F. C. Wyse, superintendent water-works. (See "Machinery Wanted.")

S. C., Ellmore.—City votes June 23 on issuance of \$10,000 water and light bonds. Address The Mayor.

S. C., Gaffney.—Board of Public Works awarded contract to Grier Filter Co. of Gaffney to erect filter for water-works plant.

S. C., Mount Pleasant.—Town Council is considering construction of water-works. Address Town Clerk.

Tex., Beaumont.—Jefferson County Commissioners considering granting 50-year franchise to W. C. Teter of New York, president of Beaumont Water-works Co., to construct water mains, standpipes and reservoirs in Jefferson county; territorial limits for which franchise is asked is to extend within 1½ miles of corporation limits of Beaumont and include Spindle Top and vicinity, Nederland and Port Neches; system is to connect with Beaumont Water Co.'s system.

Tex., Alvin.—City defeated \$4000 water-works bond issue. Address The Mayor. (Recently mentioned.)

Tex., Dalhart.—Fort Worth & Denver City Railway, R. C. Gowdy, chief engineer, Fort Worth, Tex., will erect 50,000-gallon water tank; after completion will discontinue pumping stations between Channing and Texline.

Tex., Shiner.—If \$10,000 bond election (recently noted) is carried, city will extend mains and install new pump at cost of \$4000; no bids. E. J. Merrem may be addressed.

Va., Waynesboro.—City will construct steel standpipe 25 feet diameter and 80 feet high; bids to be opened July 8; Paul B. Woodfin, Town Treasurer. (See "Machinery Wanted.")

W. Va., Adamston.—City granted franchise to John C. Southern to construct and operate water-works.

WOODWORKING PLANTS

Ala., Selma.—Wheel Stock.—Selma Spoke Co. will establish plant to manufacture automobile-wheel stock and buggy-wheel stock; will erect \$5000 mill-construction building; erection by company; plans by Smith Lumber Co., Portsmouth, O.; order placed for mill and spoke machinery; H. E. Masters, president and manager; John T. Breece, vice-president; A. L. Bown, secretary. (Recently mentioned.)

Ark., Hope.—Boxes and Crates.—Hope Box & Crate Co. incorporated with \$75,000 capital stock by James H. McCall, W. D. Hudson, Charles B. Foster and others.

Ark., Little Rock.—Handles.—Little Rock Handle Co. incorporated with \$25,000 capital stock by J. E. Coates, J. M. Townes, G. A. Leiper, A. B. Cox and others.

Ga., Atlanta.—Cabinets, etc.—Southern Cabinet & Fixture Co., 348 Lee St., will erect factory building; cost \$7000.

Md., Hagerstown.—Wheels, etc.—Hollingsworth Wheel Co. incorporated with \$40,000 capital stock to manufacture vehicle wheels,

hubs, spokes and rims; T. A. Brown, president and treasurer; B. E. Hollingsworth, vice-president; C. A. Hollingsworth, secretary; H. J. Hollingsworth, general manager; contemplates erection of three-story-and-basement brick factory, 40x106 feet, with two-story-and-basement 60x106-foot warehouse; also boiler and engine house and dryrooms; will purchase and install machinery. (See "Machinery Wanted.")

Md., Hobbs.—J. R. Frederick will rebuild stove mill recently reported burned under Smithville, Md.; main building to be 24x50 feet; engine and boiler room, 24x30 feet; ordinary construction; will install keg stove machinery, boiler and engine; daily capacity 15,000 keg staves.

Miss., Gulfport.—Staves.—Rippy Lumber Co. will install machinery for manufacturing barrel staves, cypress and pine shingles and fence pickets.

Mo., St. Louis.—Manufacturers' Coöperage Co., recently reported incorporated with \$30,000 capital stock, has elected N. V. Turner, president; W. P. Anderson, vice-president-treasurer; J. E. Mulvey, secretary-manager; will continue plants at Malden, Gideon, Five Points, Mo., and Jacksonport, Ark.; main office, 512 Wright Bldg., St. Louis.

N. C., High Point.—Furniture.—J. E. Kirkman purchased Eagle Furniture Co.'s plant for \$25,110.29; will, it is reported, organize new company and continue manufacture of furniture.

N. C., High Point.—Caskets.—High Point Casket Co. awarded contract to Montgomery Bros. of High Point to erect coffin and casket factory; main factory 52x150 feet; will install machinery to manufacture coffins and caskets; daily capacity, 100 to 200; B. H. Bradner, president; R. A. Wheeler, secretary-treasurer; Eugene Andrews, superintendent. (See "Machinery Wanted.")

Okla., Oklahoma City.—Sash, Doors, etc.—Curtis & Gartside Company (not Gartside Sash & Door Co., as recently incorrectly noted) is considering enlargement of plant, but will probably not make proposed changes for a year or two.

Tenn., Lewis County.—Staves.—Charlotte Lumber Co., Charlotte, Mich., is not ready to announce plans in connection with timber and iron-ore lands recently noted purchased by Messrs. Wm. B. Otto, president, and Fitch H. Beach, vice-president; previously noted to establish stove mills, but company states that the line of machinery is not decided. (See "Mining.")

Tex., Houston.—Wood Preserving.—Percival Wood Preserving Co. of Houston and National Lumber & Creosoting Co., Texarkana, Tex., and Ark., will consolidate and build plant in Houston.

Tex., Waco.—Coöperage.—George E. Snyder, vice-president and general manager of Memphis (Tenn.) Brewing & Malting Co., contemplates establishment of coöperage. (See "Miscellaneous Factories.")

W. Va., Charles Town.—Shannondale Timber Co. will establish factory on timber land recently noted purchased by H. C. Getzen-danner; install machinery to manufacture barrels, staves, heading, etc.; H. C. Getzen-danner, president; B. F. Langdon, vice-president; Logan B. Shutt, secretary; M. O. Roush, treasurer. (See "Machinery Wanted.")

W. Va., Grafton.—Carriages.—W. A. Swiger will enlarge carriage works; has contracted for wood and iron-working machinery.

BURNED

Ark., Hampton.—F. M. Abbott's store, loss \$3500; J. E. Sturgis' store; A. A. Ables' grocery store; loss \$30,000.

Fla., Crystal River.—Elwin Hotel; loss \$5000.

La., Pawnee.—Bering-Conrad Lumber Co.'s plant.

Md., Mt. Pleasant.—George Summer's barn.

Miss., Port Gibson.—Port Gibson Brick & Manufacturing Co.'s plant.

Miss., Vicksburg.—Dwellings of Tom Payne, Mrs. Miller and Emmett Reynolds; total loss \$5000.

N. C., Hope Mills.—L. C. McDuffie's residence; Rev. P. T. Britt's residence; Independent Order of Odd Fellows' Hall; total loss \$8000.

Okla., Chickasha.—Apache Cotton Oil & Manufacturing Co.'s seed house; loss \$50,000.

Okla., Brent.—Postoffice; H. C. Rutledge, postmaster.

Okla., Savanna.—Dunn & Reynolds' store; loss \$10,000.

Okla., Talequah.—Normal Inn.

Okla., Vian.—Vian Milling Co.'s plant; loss \$3500.

S. C., Spartanburg.—W. G. Sexton's residence; loss \$3500.

Tenn., Nashville.—National Fertilizer Co.'s plant; loss \$100,000; Frank A. Nolen, local manager.

Tex., Milvid.—Miller & Vidor Sawmill Co.'s boiler-house; main office, Galveston.

Tenn., Nashville.—Calvary Baptist Church; loss \$5000; Rev. Wilson Woodcock, pastor.

Va., Crozet.—Flour, corn and sawmill near Crozet, owned by Hugh Antrim of Richmond, Va., and operated by H. L. Jocelyn; loss \$2500.

Va., Reedville.—High School; loss \$40,000. Address The Mayor.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Birmingham.—Moesser Building Co. will erect store and apartment building; pressed brick; two stories; cost \$25,000.

Fla., Tampa.—A. J. Knight will erect store and apartment building; two stories; 52x80 feet; pressed brick; lower floor 25 stores; upper floor apartments.

Ga., Augusta.—Mrs. M. M. Mulherin will erect apartment-house; two stories; frame; cost \$4000.

Okla., Oklahoma City.—C. E. Sharp will erect apartment-house; two stories; brick veneer; cost \$5800.

Tex., Houston.—George P. Macatee, proprietor of Macatee Hotel, is having plans prepared for mercantile and apartment building; 50x100 feet; two or three stories; cost \$30,000.

Tex., Houston.—Montrose Company organized by E. C. Lamb, R. E. Fields and others; will erect apartment-house; three stories; brick; gravel roof; 41x40 feet; cost \$20,000.

Va., Portsmouth.—W. T. Eastwood and A. Rosenbaum will open bids June 30 for erection of apartment-house recently noted; 23x81 feet; low-pressure steam heat; cost \$10,000; plans by A. B. Roane, 227 High St., Portsmouth, Va.

ASSOCIATION AND FRATERNAL

Ala., Bessemer.—Benevolent and Protective Order of Elks is planning to erect lodge hall.

La., New Orleans.—Woodmen of The World are organizing company with \$100,000 capital stock to either erect lodge building or purchase building and remodel for lodge purposes; J. B. Pike, secretary-treasurer, promoter.

Mo., Kansas City.—Young Women's Christian Association is arranging to erect building; 68x109 feet; three stories; cost \$30,000.

Okla., Okene.—Knights of Pythias Lodge No. 43 will close bids June 27 for erection of lodge building recently noted; 25x100 feet; ordinary construction; cost \$4300. Address proposals to O. O. Kennett.

Va., Portsmouth.—Fraternal Order of Eagles contemplates erection of four-story brick lodge building.

W. Va., St. Albans.—Knights of Pythias, Ivanhoe Lodge, No. 71, will receive bids until June 23 for erection of lodge, store and office building; cost \$13,000. (See "Stores.")

BANK AND OFFICE BUILDINGS

Ala., Birmingham.—Prudential Savings Bank has authorized W. A. Rayfield & Co., 11 Mason Bldg., Birmingham, to prepare plans for proposed bank building; metal ceiling; tile floor; brick and stone trimmings; plate-glass front; safe-deposit vaults, with time locks; electric lighting; steam heat.

Ala., Corey.—Corey Land Co., Robert Jemison, Jr., president, 2024 3d St., Birmingham, Ala., is receiving bids for twin buildings on plaza; two-story bank and office building; cost \$24,000 each.

Ala., Stevenson.—First National Bank has plans by B. N. Alberton, 713 Cherry St., Chattanooga, Tenn., for bank building; 25x60 feet; two stories; brick; cost \$4000; bids opened June 23. Address J. Z. Schultz. (Recently mentioned.)

Fla., Tampa.—Exchange National Bank is having plans prepared by Mowbray & Uffinger of New York for bank and office building; 10 stories; brick; frontage 36 feet.

Ga., Macon.—M. O. Bellingrodt has secured commission to prepare concrete plans for 10-story fireproof office building previously noted to be erected by Georgia Life Insurance Co. at estimated cost of \$250,000; plans by Norman, Heintz & Reed, 304 American National Bank Bldg., Macon.

Ga., Ty Ty.—Ty Ty Bank, W. E. Williams, president, will erect brick bank building.

Ga., Waycross.—Southern Express Co. will erect brick office building.

Ky., Lovelaceville.—Bank of Lovelaceville, D. E. Stall, president, will erect bank building.

La., Loreauville.—Dr. J. W. K. Shaw and associates will erect bank building; bids invited.

La., Opelousas.—Union Bank & Trust Co. contemplates erecting bank building.

Md., Baltimore.—Baltimore Trust Co., Thomas H. Bowles, president, 25 East Baltimore St., plans enlarging bank building; nothing definitely decided; C. D. Fenhagen, treasurer, advises that Parker, Thomas & Rice, 1109 Union Trust Bldg., Baltimore, will probably be architects.

Miss., Gulfport.—Mississippi Abstract Title & Guarantee Co., M. P. Bouslog, general manager, purchased site 50x25 feet, and will erect two-story office building; fireproof construction; electric lighting; vault; cost \$2500; plans by J. S. Wallis (address care of company); will open bids shortly.

N. C., Asheville.—Dr. C. P. Ambler will erect office building; two stories; four rooms.

N. C., Mooresville.—Dr. A. E. Bell and E. H. Miller will erect office and store building; two stories; pressed brick.

S. C., Pickens.—Pickens Bank will erect bank and office building; 35x70 feet; two stories; pressed brick.

Tenn., Memphis.—Chickasaw Building Co. organized with \$250,000 capital stock by J. N. Falls, Joseph Newburger and C. Hunter Raine; will erect proposed office building for cotton factors and brokers; 12 stories; concrete; fireproof; 100x148 feet; estimated cost, \$250,000.

Tex., Brookeland.—Brookeland State Bank approved plans for bank building; pressed brick; concrete foundation; 22x50 feet; front of plate glass; ceiling of stamped steel; fireproof vault and burglar-proof safe of manganese steel, with time lock.

Tex., Brownsville.—First National Bank will, it is reported, erect six-story bank and office building.

Tex., Lockhart.—M. C. Jeffrey and others are interested in erection of fireproof bank building; plans not determined.

Va., Graham.—Welch Lumber Co., Welch, W. Va., will erect office building.

Va., Portsmouth.—Henry Kirn will erect office and store building; two stories; brick; 120x80 feet. (Recently mentioned.)

W. Va., St. Albans.—Knights of Pythias, Ivanhoe Lodge, No. 71, will receive bids until June 23 for erection of office, store and lodge building; cost \$13,000. (See "Stores.")

CHURCHES

Ala., Birmingham.—Richmond Place Baptist Church, J. A. Beal, pastor, contemplates erection of edifice.

Ark.-Tex., Texarkana.—St. James' Episcopal Church is having plans prepared by Selbert & Witt of Texarkana for remodeling and enlarging edifice.

Ga., Atlanta.—Park Street Methodist Church, Dr. J. W. Lee, pastor, adopted plans for proposed edifice.

Ga., Augusta.—Woodlawn Methodist Church, Rev. G. F. Venable, pastor, will erect edifice.

La., Elton.—Catholic congregation is considering erection of edifice. Address The Pastor, Catholic Church.

Md., Annapolis.—Isaac Hobberger purchased two-story frame dwelling for \$3150 and will remodel for synagogue.

Md., Baltimore.—Grace United Evangelical Church, Rev. D. F. Young, pastor, 926 East Preston St., has plans by B. Howard Mason, 1221 Valley St., Baltimore, for church and Sunday-school building; one story and basement; 53x70 feet; brick; estimated cost, \$18,000.

Md., Baltimore.—Christ Methodist Episcopal Church, Rev. M. Smith, 1707 North Fulton Ave., pastor, has plans by Henry J. Tingley, 314 North Charles St., Baltimore, for edifice on North Ave. recently noted; 61x35 feet; stone construction; steam heat; electric lighting; cost \$20,000; bids opened.

Md., Baltimore.—Faith Presbyterian congregation, Broadway and Biddle St., is having plans prepared for stone Sunday-school building; estimated cost \$10,000; Rev. John P. Campbell, 1728 North Broadway, is pastor.

Md., Havre de Grace.—Grace Reformed Episcopal Church will open bids at once, through Edwin E. Pearson, architect, Havre de Grace, for erection of edifice recently

noted; 32x50 feet; Gothic design; steam heat; gas and electric lighting; chime of bells; cost \$5000.

N. C., Winston-Salem.—Grace Methodist Episcopal congregation will erect addition to edifice. Address The Pastor, Grace Methodist Episcopal Church.

N. C., Winston-Salem.—West End Methodist Church will have plans prepared for edifice to cost \$40,000; H. A. Hayes, chairman building committee.

Okla., Altus.—Methodist Episcopal Church, Robert Hodgson, pastor, is having plans prepared by C. Chism (address, care of Mr. Hodgson) for edifice recently noted; 110x85 feet; probably hydraulic pressed concrete blocks; heating not determined; gas and electric lighting; cost \$35,000.

Okla., Oklahoma City.—First Christian Church approved plans by Van Slyke & Woodruff of Oklahoma City for edifice; Roman Corinthian style of architecture; exterior of Oklahoma granite, gray pressed brick and terra-cotta; domes of copper, with tile roofs; basement to contain Sunday-school, assembly room, gymnasium, heating plant, etc.; latter will be "Piennan" system of direct-indirect steam, with blowers, horizontal tubular boilers and air washers; foyer of auditorium to seat 550; estimated cost \$100,000.

Tenn., Johnson City.—Central Baptist Church, Rev. T. G. Davis, pastor, is considering erection of edifice to cost \$40,000 to \$50,000.

Tenn., Memphis.—St. Luke's Episcopal congregation at Idlewild purchased site, 125x250 feet, on which to erect edifice. Address The Pastor, St. Luke's Episcopal Church.

Tenn., Nashville.—Calvary Baptist Church, Rev. Wilson Woodcock, pastor, will rebuild edifice to replace structure reported burned at loss of \$5000.

Tenn., Nashville.—Advent Church adopted plans by Robert Sharpe of Nashville for edifice; Gothic architecture; brick; stone trimmings; seating capacity 200; six-room rectory adjoining; cost \$20,000.

Tex., Calvert.—Baptist congregation will erect \$15,000 edifice. Address The Pastor, Baptist Church.

Tex., Coleman.—First Presbyterian Church will erect edifice; brick; stone trimmings; bids to be opened June 27; plans and specifications on file in office of Waller, Shaw & Field, Fort Worth, Tex., and First National Bank, Coleman; each bid to be accompanied by certified check for \$50; R. H. Alexander, secretary building committee.

Tex., Dallas.—First Presbyterian congregation purchased site on which to erect \$100,000 edifice. Address The Pastor, First Presbyterian Church.

Tex., Richmond.—Methodist church, Rev. A. A. Kidd, pastor, contemplates erecting edifice.

Tex., Roanoke.—Baptist Church will open bids August 1 for erection of edifice recently noted; 50x60 feet; possibly gasoline lighting; cost \$4000. Address proposals to W. H. Carder.

Tex., Sulphur Springs.—Methodist Episcopal congregation will erect \$25,000 edifice. Address The Pastor, Methodist Episcopal Church.

Va., Bristol.—First Baptist Church, Rev. James M. Shelburns, D.D., pastor, 608 Moore St., has not adopted plans for edifice recently noted; cost \$40,000; construction will not begin until after January 1, 1911.

Va., Danville.—First Presbyterian congregation will erect edifice to cost \$30,000. Address The Pastor, First Presbyterian Church.

Va., Fredericksburg.—Baptist Church, Rev. R. A. Williams, pastor, will enlarge edifice; estimated cost \$12,000 to \$15,000.

Va., Richmond.—Bethel A. M. E. congregation will erect edifice; pressed brick; stone trimmings. Address The Pastor, Bethel A. M. E. Church.

W. Va., Elm Grove.—Stone Church has engaged Charles Bates, Wheeling, W. Va., to prepare plans for new edifice and to estimate cost of enlarging present building.

CITY AND COUNTY

Ala., Birmingham.—Fire Station.—City will erect fire station to replace Greener Fire Station No. 6; Harry Jones, acting Mayor.

Ala., Florence.—Lauderdale County Commissioners, J. L. Hughston, Probate Judge, will open bids July 12 for erection of jail recently noted; two stories and basement; fireproof construction; steam heat; gas and electric lighting; cost \$20,000; plans by B. B. Smith, Montgomery, Ala.

Fla., Pensacola.—Market.—City defeated bond issue to erect market. Address The Mayor. (Recently mentioned.)

Ga., Montezuma.—City is proceeding with construction of proposed engine-house in connection with water-works station.

La., New Orleans.—Library.—City has plans by Lagarde & Burke, 409 Wells Fargo Bldg., New Orleans, for Carnegie Library; Spanish renaissance style; lecture-room to seat 335 people; pressed brick; terra-cotta trimmings; Spanish tile roof; electric lights; structure will be 50x80 feet; fireproof construction; hot-water heat; cost \$22,000. (Previously noted.)

Miss., Gulfport.—Fire Station.—City will soon award contract for erection of two-story frame building for George M. Foote Hose Co.; N. D. Goodwin, City Clerk.

Miss., Tylertown.—Jail.—City will erect jail; is receiving plans. Address The Mayor.

Mo., Kansas City.—City Hall.—City adopted plans for proposed city hall; two stories and basement; 61x76 feet; will probably advertise for bids July 1; Llewellyn Jones, Mayor.

N. C., Greenville.—Pitt County Commissioners and Building Committee will receive bids until July 11 for erection of county courthouse and jail recently noted; cost of jail \$25,000; plans by Milburn, Helster & Co., Home Life Bldg., Washington, D. C.; certified check for \$1000, payable to J. P. Quinley, chairman; separate bids will be received for jail, courthouse, steel cells and heating apparatus or for whole; plans and specifications on file with architects or at office of Register of Deeds; each bid must be sealed and addressed to Register of Deeds of Pitt county and marked "Bids for Courthouse and Jail"; usual rights reserved.

Okla., Duncan.—Stephens county will vote in November on bond issue to erect \$10,000 jail. Address County Commissioners.

S. C., Gaffney.—Board of Directors, City Hospital, Dr. R. T. Ferguson, secretary, will expend \$12,000 to erect hospital; brick; heating not decided; architect not selected; address proposals to H. D. Wheat. (Dr. R. T. Ferguson and others recently noted to incorporate company with \$20,000 capital stock.)

Tenn., Paris.—Jail.—Henry County Commissioners will open bids June 27 for erection of jail recently noted; ordinary construction; cost \$14,000 to \$15,000; plans by B. B. Davis, Atherton Bldg., Louisville, Ky.; following contractors will submit bids: Geo. Moore & Son, Nashville, Tenn.; F. B. Hull Construction Co., Jackson, Miss.; W. C. Lewman, Louisville, Ky.; J. L. Richards, Lebanon, Tenn.; Orgill Bros. & Co., Memphis, Tenn.; A. L. Snow, Paris, Tenn.

Va., Norfolk.—Board of Control asks appropriation of about \$8000 additional for improving and repairing Queen St. fire-engine house. (\$10,000 previously noted appropriated.)

COURTHOUSES

Ark., Rison.—Cleveland county, J. M. McMurrey, Clerk, voted tax to erect \$45,000 courthouse.

N. C., Greenville.—Pitt County Commissioners and building committee will receive bids until July 11 for erection and completion of courthouse and jail recently noted; cost of courthouse, \$75,000; plans by Milburn, Helster & Co., Home Life Bldg., Washington, D. C.; certified check for \$1000, payable to J. P. Quinley, chairman; separate bids will be received for courthouse, jail and heating apparatus, or for whole; plans and specifications on file with architects or at office of Register of Deeds; each bid must be sealed and addressed to Register of Deeds of Pitt county and marked "Bids for Courthouse and Jail"; usual rights reserved.

Okla., Duncan.—Stephens county will vote in November on bond issue to erect \$75,000 courthouse. Address County Commissioners.

Tex., Beeville.—Bee County Commissioners have plans by Stephenson & Heidenfels, Beeville, for \$75,000 courthouse. (Previously noted.)

Tex., Port Lavaca.—Calhoun county voted \$44,000 bond issue to erect courthouse. Address County Commissioners.

Va., King George.—King George county defeated \$10,000 bond issue to erect new courthouse; is planning to remodel present courthouse. Address County Commissioners. (Recently mentioned.)

DWELLINGS

Ala., Fort Payne.—Earl Cochran contemplates erection of bungalow.

Ala., Fort Payne.—John W. Baxter will erect residence.

Ala., Fort Payne.—J. B. Harison will erect two dwellings.

Ark., Little Rock.—Y. E. Whitmore has

plans by H. Reed and H. J. Harker, State National Bank Bldg., Little Rock, for dwelling recently noted; eight rooms and attic; fireproof construction; brick veneer; slate roof; rubble foundation; day's labor.

D. C., Washington.—L. E. Breuninger, 3225 18th St. N. W., has plans by N. R. Grimm, 627 F St. N. W., for five two-story brick dwellings at 2508-2516 Wisconsin Ave. N. W.; cost \$15,000; construction by owner.

D. C., Washington.—T. L. Lewis, 1805 2d St. N. W., has plans by N. R. Grimm, 627 F St. N. W., Washington, for five dwellings at 615-21 Quincy St. N. W., and 3811 7th St. N. W.; two stories; brick; cost \$15,000; construction by owner.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., has plans by H. A. Bright, 622 Maryland Ave. N. W., Washington, for three two-story brick dwellings at 809-13 K St. N. E.; cost \$7500; construction by owner.

D. C., Washington.—Milton Dana Morrill, architect, Corcoran Bldg., Washington, prepared plans for two dwellings on Highland Boulevard Ave.; cement; walls will be poured in steel moulds and covered with waterproofing.

D. C., Washington.—E. B. Grandin has plans by Wood, Donn & Deming, 808 17th St. N. W., Washington, for residence on New Hampshire Ave. north of Dupont Circle; English style.

D. C., Washington.—John H. Nolan, 1413 G St. N. W., has plans by Hill & Kendall, Corcoran Bldg., Washington, for five three-story brick dwellings at 2140-48 Wyoming Ave.; cost \$10,000; construction by owner.

D. C., Washington.—E. O. Wagenhorst, 601 Bond Bldg., has plans by Cloughton West, 222 Oxford Bldg., Washington, for three three-story brick dwellings at 148-52 Belmont St. N. W.; cost \$13,000; construction by owner.

D. C., Washington.—Leon Dessez will not at present erect dwelling recently noted.

D. C., Washington.—Edward M. Dulin, 1279 New Hampshire Ave. N. W., will erect row of brick dwellings on 22d St., between M and N Sts.

Fla., Jacksonville.—Raymond C. Turk will erect dwelling; two stories; frame; cost \$7500.

Fla., Jacksonville.—John H. Tucker, Jr., will erect two residences; two stories; brick; cost \$7300.

Fla., Fort Pierce.—W. T. Jones has engaged R. E. Blanchard (address, care of owner) to superintend construction of dwelling recently noted; 55x36 feet; mill construction; brick veneer; fireplaces; wood heaters; gasoline lighting; cost \$5000; plans by G. T. Butler, 22 Hogan St., Jacksonville, Fla.; materials purchased.

Fla., Tampa.—B. C. Bonfoey of Bonfoey & Elliott will erect \$4000 residence.

Ga., Atlanta.—Mrs. M. E. Chapman will erect \$4500 dwelling.

Ga., Atlanta.—A. & C. Glenn will erect residence; cost \$6500.

Ga., Atlanta.—Mrs. M. M. McCall will erect \$7000 residence.

Ga., Atlanta.—H. W. Wolf will erect \$7000 dwelling.

Ga., Augusta.—Henry Cohen will erect two-story frame dwelling; cost \$4500.

Ga., Augusta.—John J. Cohen, Jr., will erect two frame two-story residences; cost \$8000.

Ga., Cordele.—Hiram Wheeler will erect residence.

Ga., Cordele.—C. T. Cower will erect \$10,000 residence.

Ga., Montezuma.—C. L. DeVaughn has begun construction of \$10,000 dwelling recently noted to be erected.

Ga., Montezuma.—J. W. Solomon will erect proposed \$3000 dwelling.

Ga., Montezuma.—E. M. McKenzie has begun construction of \$10,000 brick dwelling recently noted to be erected.

Ga., Savannah.—Joseph F. Gray will erect residence.

Ga., Savannah.—C. C. Ely will erect dwelling.

Ga., Savannah.—Leigh M. White, president of Delmonico Company, will erect dwelling.

Ga., Stockbridge.—W. W. Ward will erect residence.

Ky., Louisville.—Dr. E. Lee Heflin, 22d and Market Sts., has plans by Herman Wishmeyer, Kenyon Bldg., Louisville, for dwelling recently noted; two and a half stories; 50x33 feet; ordinary construction; hot-water heat; electric lighting; cost \$5000; detail work.

La., Baton Rouge.—P. H. and J. S. Kean will erect several cottages.

La., Baton Rouge.—L. F. Hart will erect dwelling.

La., Baton Rouge.—A. T. Prescott will erect two bungalows.

La., New Orleans.—Mrs. G. McG. Heep will erect residence; two stories; cost \$6000.

La., New Orleans.—E. D. Keep will erect two-story brick and frame dwelling; cost \$4000.

La., New Orleans.—Hirsch-Levy Realty Co. will erect three single and double cottages; cost \$3800.

La., New Orleans.—Mrs. M. C. Weigel will erect double two-story residence; cost \$6000.

La., New Orleans.—E. Rosenberg will erect two-story residence; cost \$3460.

Md., Baltimore.—George H. Haynes, Palatka Ave., near Garrison Ave., will erect three cottages on Allendale Ave.; two and a half stories; frame; 22x36 feet; cost \$9000.

Md., Baltimore.—William P. Parker has plans by J. E. Maher, 305 Maryland Savings Bank Bldg., Baltimore, for two-and-a-half-story frame dwelling at Lenox; cost \$6000.

Md., Baltimore.—German Land Improvement Co., 205 Law Bldg., has plans by Jacob Gerwig, 210 East Lexington St., Baltimore, for proposed 30 dwellings on Eutaw Pl.; 18 will be 20x30 feet, 12 18x30 feet; ordinary construction; hot-water heat; electric lighting; clothes driers; laundry; house phones; cold-storage compartments; cost \$360,000; construction by owner.

Md., Baltimore.—C. T. Griffin has plans by Jacob F. Gerwig, 210 East Lexington St., Baltimore, for six dwellings on Adams St., near Cromwell St.; two stories; brick; 14x18 feet.

Md., Baltimore.—John T. Donohue, 1808 Thames St., will expend \$30,000 to erect 20 dwellings on Eastern Ave.; 14.9x50 feet; two stories; mill construction; hot-air heat; Mason R. Stone, 2238 East Hoffman St., Baltimore, recently noted as preparing plans.

Md., Baltimore.—Charles Diffenderfer has plans by Owens & Cisco, Continental Bldg., Baltimore, for alterations and addition to dwelling on Bellona Ave.; cost \$15,000; contractors estimating are D. Harding, Towson, Md.; I. Owings, Highland Ave., Mt. Washington, Md.; Philip Watts, Pikesville, Md.; G. Walter Tovell, Reisterstown, Md.; Gladfelter & Chambers, 2072 Woodberry Ave., Baltimore.

Md., Baltimore.—Harrison McMalns, 315 Dolphin St., has plans by William A. Ehlers, Catonsville, Md., for cottage at Mont Alto; 20x36 feet; cost \$6000.

Md., Baltimore.—A. Warren Edwards, 1009 North Fulton Ave., will erect 22 dwellings on Chelsea Ave., Walbrook; two stories.

Md., Baltimore.—Park Land Corporation, Garrison Ave., opposite Kelo Home, will erect two-and-a-half-story frame cottage on Main Ave.; 30x40 feet; cost \$3500.

Md., Baltimore.—Wm. A. Davidson, 1736 Thomas Ave., has plans by C. W. Price, 1912 West Franklin St., Baltimore, for eight two-story dwellings on Westwood Ave.; 14x18 feet; cost \$10,000.

Md., Baltimore.—James A. Bealmear & Son Company, 301 Fidelity Bldg., will erect two-and-a-half-story frame cottage on Roland Ave. near Gladstone Ave.

Md., Baltimore.—Frank Novak, 2800 Jefferson St., will erect 200 dwellings on Patuxent, Monument, Madison Sts., Lakewood and Kenwood Aves.; two stories; brick; cost \$350,000; construction of first 40 to begin in fall.

Md., Baltimore.—Grace United Evangelical Church, 926 East Preston St., Rev. D. F. Young, pastor, is having plans prepared by B. Howard Mason, 1221 Valley St., Baltimore, for parsonage at Preston and Wilcox Sts.; three stories; brick; cost \$3000.

Md., Baltimore.—Charles Huether, 3309 East Pratt St., has plans for cottage on Park Manor Ave.; two and a half stories; frame; 26x41 feet; cost \$3500.

Md., Baltimore.—J. Charles Linthicum & Bro., 230 St. Paul St., and Joseph L. White, 28 South Broadway, will erect 11 dwellings on Falt Ave.; two stories; brick.

Md., Mt. Washington.—Thomas Strouse, Pimlico Rd., Baltimore, Md., will erect residence at Mt. Washington Heights.

Md., Mt. Washington.—Benjamin A. Stansbury, 401 Fidelity Bldg., Baltimore, Md., will erect residence at Broad Hills.

Md., Roland Park.—W. F. Wehr has plans by Edward L. Palmer, 112 Elmhurst Rd., Roland Park, for two-and-a-half-story frame dwelling.

Miss., Meridian.—Henry Heiss will erect residence at Marion Park.

Md., Severna Park.—Henry D. Koethe, 18-20 South Liberty St., Baltimore, Md., will

erect cottage; two and a half stories; frame; cost \$6000.

Mo., St. Louis.—Philip C. & I. Co., 583 Florissant Ave., will erect two-story store and dwelling; cost \$3800.

Mo., St. Louis.—Mrs. C. Warren will erect two-story dwelling; cost \$3000.

Mo., St. Louis.—A. G. Rupp will erect two-story tenement; cost \$4200.

Mo., St. Louis.—F. Ossowsky will erect two two-story tenements; cost \$7800.

Mo., St. Louis.—Sophia Rosenberg will erect two-story brick tenement; cost \$5000.

Mo., St. Louis.—J. O'Neill will erect two-story brick tenement; cost \$4800.

Mo., St. Louis.—Emma Fette will erect three one-and-a-half-story frame dwellings; cost \$5400.

Mo., St. Louis.—B. C. Hensiek will erect dwelling; two stories; brick; cost \$3250.

Mo., St. Louis.—A. & K. Scheibley will erect two-story brick tenement; cost \$4500.

Mo., St. Louis.—M. Gutierrez will erect addition to dwelling; cost \$3000.

Mo., St. Louis.—Harvey A. McCallister will erect bungalow.

Mo., St. Louis.—Augustus A. Busch purchased site and will expend \$50,000 for improving grounds and \$200,000 for erection of castle.

N. C., Winston-Salem.—T. K. Reniger will erect dwelling.

Okla., Oklahoma City.—W. E. Lipe will erect two-story brick dwelling; cost \$4500.

Okla., Oklahoma City.—Oklahoma Bag & Cotton Mills will build 100 cottages. (See Textile Mills.)

S. C., Simpsonville.—Simpsonville Cotton Mills will build 50 cottages.

Tenn., Memphis.—A. B. Knipmeyer will erect dwelling; hot-water heat; cost \$4500.

Tenn., Memphis.—Wm. White will erect dwelling; hot-water heat; cost \$4500.

Tenn., Memphis.—J. R. Ellis will erect nine-room residence; hot-water heat; cost \$5500.

Tenn., Memphis.—J. D. Bell will erect residence; two stories; brick veneer; eight rooms; cost \$4700.

Tenn., Memphis.—E. H. Goodlander will erect dwelling; two stories; nine rooms; brick veneered; cost \$7250.

Tenn., Nashville.—D. W. White will erect residence; two stories; brick; cost \$5000.

Tenn., Chattanooga.—S. D. McKeynolds is having plans prepared by Huntington & Sears, James Bldg., Chattanooga, for proposed dwelling; two stories; nine rooms; cement floor to basement; brick and stucco; shingle roof; hard pine interior finish; hot-air heat; gas and electric lighting; cost \$5000.

Tenn., Nashville.—Turner Henderson will erect Japanese bungalow; one story; eight rooms; 63x32 feet; front porch 14x63 feet; garage beneath; pergola on one side, with tile floor; beamed ceilings in dining and living rooms; paneled wainscoting; glass sliding and folding doors; hot-water heat; gray brick construction; stone trimming; cost \$15,000; plans by and construction under supervision of Thomas S. Marr, Nashville.

Tenn., Nashville.—D. W. White will erect two-story residence; cost \$5000.

Tex., El Paso.—Albert Rodriguez will erect \$3500 residence.

Tex., El Paso.—Mrs. M. J. Hitchcock will erect residence; stone and brick; cost \$6800.

Tex., Houston.—E. R. Emery will erect residence; two stories; lower story cement blocks; upper floor wood.

Tex., Houston.—A. L. Metcalf will erect 12-room residence; cost \$5000.

Tex., Victoria.—Ben Dreyfus is planning to remodel residence.

Va., Alta Vista.—Alta Vista Cotton Mill Co. will erect 50 operatives' cottages; brick construction; engineers in charge, Whitted & White of Charlotte, N. C.; president, A. C. Hutchison, also of Charlotte.

Va., Chesterfield.—David Dunlop, Petersburg, Va., is having plans prepared by Carneal & Johnston, Richmond, Va., for residence; stucco on brick; terra-cotta trimmings; cost \$25,000.

Va., Richmond.—S. G. Meredith will expend \$20,000 to erect eight frame dwellings, including one store, and four brick dwellings; mill construction; Latrobe stoves; gas lighting; plans and construction by owners; sub-contracts let. (See "Machinery Wanted.")

Va., Richmond.—H. M. Allport is having plans prepared by Carneal & Johnston, Richmond, for residence; Spanish Renaissance style; tapestry brick; green tiled roof; cost \$20,000.

Va., Richmond.—W. W. Haley will erect two-story brick tenement; cost \$5600.

GOVERNMENT AND STATE

N. C., Raleigh.—Hospital.—Bids will be received until July 12 for erection of two buildings at State Sanatorium for Treatment of Tuberculosis; for plans and specifications apply to Dr. M. E. Street, Glendon, N. C.; J. R. Blair, Troy, N. C., or J. R. Gordon, Jamestown, N. C.

Va., Lynchburg.—Hospital.—Government will expend \$20,000 to erect hospital for epileptics in Amherst county, near Lynchburg; 86x116 feet; ordinary construction; low-pressure steam heat; electric lighting; plans by Frye & Chesterman, Lynchburg; bids opened June 20. (Recently noted.)

Va., Marion.—Asylum.—Southwestern State Hospital for Insane, J. C. King, superintendent, will have plans prepared by C. B. Kearfott, Nickles Bldg., Bristol, Tenn., for addition to hospital; 176x40 feet; slow-burning construction; cost \$25,000; day's labor.

HOTELS

Ala., Birmingham.—Messer Building Co. has plans by Miller & Martin, Birmingham, for proposed store and hotel building; two stories; white brick; cost \$30,000.

Ala., Troy.—T. H. Mabson will erect hotel to replace City Hotel; three-story appearance front and four-story rear; 60 rooms; steam heat.

Ala., Troy.—Hendon B. Mason will erect 60-room hotel.

Ark., Heber.—Dr. Cyrus F. Crosby will expend \$8000 to erect hotel recently noted; 90x125 feet; fireproof construction; heating not decided; plans and construction by owner. (See "Machinery Wanted.")

Ark., McGehee.—McGehee Hotel & Opera House Co. incorporated with \$10,000 capital stock; L. W. Hyon, president; G. B. Ewing, vice-president; Scott McGehee, treasurer; M. A. Tucker, secretary.

Ark., Piggott.—H. W. Moore may be addressed relative to erection of \$20,000 hotel.

D. C., Washington.—Washington Hotel Co., E. O. Whitford, president, No. 6 Wholesale Row, Center Market, has plans by Appleton P. Clark, Jr., Union Trust Bldg., Washington, for erection of hotel; seven stories; brick, stone, terra-cotta and concrete; cost \$200,000; construction by owner. (Previously noted.)

D. C., Washington.—Christian Heurich of Christian Heurich Brewing Co., 25th, 26th, D and Water Sts., will erect hotel at Pennsylvania Ave. and 14th St. N. W.

Fla., Fort Myers.—Hotel Bradford is having plans prepared by F. Kennard, Tampa, Fla., for addition to hotel.

Ga., Donaldsonville.—T. J. Shingler will erect brick hotel.

Ga., Dublin.—Lewis C. Beacham will erect 22-room hotel.

Miss., Vicksburg.—Mississippi Hotel Co. incorporated with \$30,000 capital stock by George L. Keen, E. H. Piper and others. (Mr. Keen previously noted to purchase and enlarge Hotel Carroll.)

Mo., Kansas City.—Raymond Hulst will erect hotel; four stories; 40x129 feet; cost \$40,000.

Mo., Kansas City.—J. R. Donegan, manager, will expend \$150,000 for improvements to Hotel Edward; erect four-story addition, extending 60 feet in rear, and additional story to present building; enlarge cafe and erect balcony in same, etc.

S. C., Barnwell.—Barnwell Hotel & Improvement Co., E. A. Brown, secretary, has not selected architect to prepare plans for Commercial Hotel recently noted; 40-room structure; electric lighting; estimated cost, \$12,000.

Tex., Dallas.—Edw. A. Faust, vice-president Anheuser-Busch Brewing Association, St. Louis, Mo., states that intention is to build two hotels in Dallas and Waco, Tex.; purchase of various properties not yet concluded. (20-story hotel, costing \$1,000,000, recently noted contemplated.)

Tex., San Antonio.—T. D. Cobbs will erect addition to Hutchins' Hotel.

Tex., Waco.—Anheuser-Busch Brewing Association of St. Louis, Mo., may build hotel. (See Tex., Dallas.)

Va., Roanoke.—J. R. Nichols of Bedford City, Va., is planning to erect hotel; 30 or 40 rooms.

W. Va., Huntington.—Prichard & Robinson will erect hotel; seven stories; 100 rooms; cost \$200,000.

MISCELLANEOUS STRUCTURES

Fla., Jacksonville.—Salvation Army will expend \$20,000 to erect building recently men-

tioned; ordinary construction; three stories and basement; 30x100 feet; steam heat; electric lighting; to contain auditorium, apartments, working girls' home, baths, free clinic and dispensary, etc.; plans by W. B. Camp, Jacksonville; bids opened July 30. Address Capt. M. Walker, 1006 West Monroe St., or Maj. Edwy White, 531 Candler Bldg., Atlanta, Ga. (See "Machinery Wanted.")

Fla., Pensacola.—Clubhouse.—Pensacola Yacht and Motor Boat Club will erect two-story clubhouse; site 125x65 feet; will also construct wharf.

Ga., Atlanta.—Wesley Memorial Enterprises may erect home for young women. Address Rev. Frank Siler, pastor Wesley Memorial Church.

Ga., Savannah.—Sanitarium.—Oglethorpe Sanitarium will erect two-story sanitarium.

Ky., Louisville.—Hospital.—Sisters of Nazareth Literary Benevolent Society will erect addition to Sts. Mary and Elizabeth Hospital; five stories; 200x100 feet; cost \$80,000; plans by J. J. Gaffney of Louisville.

La., New Orleans.—Building.—Orleans Medical Society will erect two-story brick building to cost \$12,000.

Md., Frederick.—Grandstand.—Frederick Fair Association is having plans prepared by Hamme & Leber, West Bldg., York, Pa., for grandstand on fair grounds; frame and concrete; cost \$5000; bids will soon be received by architects.

Md., Relay.—Engine-house and Assembly Hall.—Relay Volunteer Fire Department, Albert Burton, chairman building committee, will expend \$3500 to erect engine-house and assembly hall recently noted; 30x40 feet; ordinary construction; steam heat; electric lighting; plans by Henry J. Tinley, 314 North Charles St., Baltimore.

Mo., Kansas City.—Day Nursery.—Thomas H. Swope Social Settlement, J. M. Chafin, superintendent, has adopted plans for day nursery; three stories; 150x50 feet; accommodations for about 75 children; estimated cost, \$20,000; contract will soon be awarded.

N. C., Flat Rock.—Joseph W. Holt, Montgomery, Ala., and associates purchased Rhett Place, comprising mansion and 240 acres of wooded land; reported purchase price \$25,000; will expend \$75,000 in improvements, including remodeling of mansion as clubhouse, erection of cottages and construction of concrete dam to form artificial lake; landscape engineers are preparing plans for walks and driveways; Mr. Holt is registered at Hotel Gates, Hendersonville, N. C.

S. C., Charleston.—Library.—Charleston Library Society, Dr. Robert Wilson, president, will erect library on King St.

S. C., Columbia.—Hospital.—Columbia Hospital Association contemplates erection of additional buildings; estimated expenditure \$75,000.

Tenn., Chattanooga.—Joe Miles, 611 Cherry St., will erect building on 9th St.; cost \$4040.

Tex., Dallas.—Sanitarium.—G. W. Owens, George W. Riddle, J. H. Reuss, Kenneth Foree and F. B. Moran are promoting organization of company with \$150,000 capital stock to erect sanitarium.

Tex., Dallas.—Stable.—Charles B. Taylor will erect livery stable; one story; 100x100 feet; brick; cost \$4000.

Tex., San Antonio.—Clubhouse.—Harvey L. Page Company advises that company has not been appointed architect for San Antonio Club building; not to be considered at present. (Recently noted.)

RAILWAY STATIONS

Miss., Greenwood.—McClanahan & Terry, Columbus, Miss., are progressing with construction of proposed \$4500 brick passenger depot for Southern Railway in Mississippi; size 32x78 feet; electric lighting; plans by F. T. Lack, Mobile & Ohio Railroad, Mobile, Ala.

Mo., Mexico.—Chicago & Alton Railroad, W. D. Taylor, chief engineer, Chicago, Ill., has plans, it is reported, for brick freight station to cost \$16,400.

N. C., Newbern.—Norfolk & Southern Railroad Co., F. L. Nicholson, chief engineer, will expend \$35,000 to erect union passenger station and division offices; 126x30 feet; ordinary construction; steam heat; incandescent electric lighting. (Previously noted.)

Tenn., Morristown.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., will, it is reported, erect \$40,000 passenger station.

S. C., Greenwood.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., will, it is reported, erect \$15,000 passenger station; other improvements to cost \$5000 additional.

Tenn., Memphis.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., and Nashville, Chattanooga & St. Louis Railway, H. McDonald, chief engineer, Nashville, Tenn., have completed plans for two freighthouses, one for inbound business and other for outbound; inbound freighthouse will be 60x320 feet; brick and steel; fireproof construction; two or four stories; outbound house will be 50x320 feet; one story; brick and steel; fireproof; total cost about \$100,000.

SCHOOLS

Ala., Anniston.—City accepted plans for 12-room addition to Wilmer School; cost \$19,000.

Ala., Birmingham.—St. Mark's Church and School Corporation is having plans prepared by W. A. Rayfield & Co., 11 Mason Bldg., Birmingham, for three additional brick buildings; stone trimmings; steam heat; electric lighting.

Ala., Birmingham.—City is receiving new bids for proposed East Birmingham school, and may, if bids prove too high, erect same under supervision of Board of Education; cost not to exceed \$50,000; awarded contract at \$5685 to J. M. Wright & Co. for plumbing in East End negro school, and at \$4850 for plumbing in Barker school; at \$525 to Alabama Supply Co., Birmingham, for wiring Barker school. Address The Mayor.

Ala., Lineville.—City will erect \$15,000 school. Address The Mayor.

Ark., Conway.—B. W. Torreyson, secretary, receives bids until July 2 for erection of three-story-and-basement dormitory at State Normal School: (1) To enclose building, finish all of first floor and portion of basement; (2) For entire completion of building, including plumbing and wiring, board reserving option of acceptance of second proposition within one year from date of signing contract; certified check for \$500, payable to B. W. Torreyson, secretary; plans and specifications at office of president of school at Conway, or of Charles L. Thompson, architect, Little Rock, Ark. (Recently mentioned.)

Ark., Jonesboro.—State reported to erect \$100,000 agricultural school. Address State Agricultural School Board.

Ark., Moro.—Moro School District trustees will erect brick school; cost \$6000.

Ark., Piggott.—Piggott Special School District (George W. Seitz to be addressed) will expend \$15,000 to erect schoolhouse recently noted; three stories; 68x73 feet; 12 rooms; brick; fireproof construction; steam heat; plans by L. M. Weathers, Memphis, Tenn.; bids opened June 15.

Ark., Prescott.—School Board will erect high-school building.

Fla., Fort Myers.—City will vote August 16 on \$10,000 bond issue to erect school; Robert Lilly, Mayor. (Recently mentioned.)

Fla., Jacksonville.—Board of Public Instruction of Duval County will erect school in Fairfield; two stories; brick; eight rooms; steam heat; cost \$8000.

Ga., Atlanta.—University of Georgia contemplates various improvements, including installation of heating apparatus in various buildings, new floors and other repairs in Moore College, residence for faculty and erection of other residences; also contemplates taking over Lucy Cobb Institute as part of university system.

Ga., Augusta.—Board of Education will receive estimates until July 1 for erection of addition to Woodlawn School; plans and specifications on file at office of L. F. Goodrich, architect, Augusta.

Ga., Collins.—City voted bonds to erect \$10,000 school. Address The Mayor.

Ga., Locust Grove.—Locust Grove Institute will erect girls' dormitory, install heating apparatus in main building and electric lights.

Ga., Rome.—Berry School has plans by King & Walker, Atlanta, Ga., for boys' dormitory recently noted; 92x35 feet; frame covered with concrete over metal laths; hot-water heat; electric lighting; cost \$12,000; construction by boys of school under supervision of superintendent.

Ky., Guthrie.—Town voted bonds to erect school. Address Town Council.

Ky., Louisville.—School Board rejected all bids for proposed school at Morgan and Bland Sts.; will have plans revised and advertise for new bids; cost \$60,000 to \$65,000; plans by Thomas & Bohne, Keller Bldg., Louisville; awarded contract at \$26,538 to A. J. Anderson & Co., Louisville, for heating apparatus for Overhill St. school.

La., Amite.—A. C. Lewis, superintendent school district, may be addressed relative to

\$35,000 bond issue for erection of school building recently noted.

La., Gretna.—Jefferson Parish School Board is having plans prepared by Stephens & Co., New Orleans, La., for proposed school.

La., Plaquemine.—Rev. G. Bosch will receive bids until July 1 for erection of St. John's School; certified check for \$200, payable to Mr. Bosch; plans by Dibol, Owen & Goldstein, New Orleans, La.; plans and specifications on file at St. John's Rectory.

Md., Elkton.—School Commissioners plan expending \$50,000 for improvements to schools.

Miss., Belzoni.—District School Trustees will erect school to replace present structure.

Miss., Picayune.—Picayune High School, W. I. Thames, principal, will erect \$5000 dormitory.

Miss., Poplarville.—Trustees of Pearl River County Agricultural High School will erect two-story brick administration and chapel building; cost \$17,000.

Miss., Richton.—City will open bids shortly for erection of school building; 80x84 feet; two stories; heating and lighting not decided; cost \$9000 to \$10,000; plans by R. E. Lee, Hattiesburg, Miss. (Bond issue of \$20,000 recently noted.)

Mo., Granby.—J. Hutsell, secretary of School Board, will receive bids until June 25 for erection of addition; four rooms.

Mo., Joplin.—Board of Education will erect \$250,000 high-school building, remodel present high school, erect two, six and four-room additions, respectively, to Columbia, Irving and Emerson schools, and erect school at Parr Hill.

N. C., Winston-Salem.—Board of Education, J. C. Buxton, chairman, will expend \$12,000 in erection of auditorium and several rooms to North Winston school and addition of several rooms to East Winston school; also erection of new negro school; North Winston school will be brick; others of frame; electric lighting; architect not selected.

N. C., Wilmington.—New Hanover County Board of Education will erect \$20,000 addition to high-school building for districts Nos. 1 and 2.

N. C., Winston-Salem.—City is having plans prepared for addition to North Winston graded school; 77x56 feet; two stories; brick. Address The Mayor.

Okla., Vailant.—Oak Hill Academy, Rev. R. E. Flekinger, superintendent, will expend \$4500 to erect girls' dormitory and boarding hall previously noted; dormitory will be 36x90 feet and boarding hall 86x32 feet; three stories and attic; ordinary construction; frame; two furnaces; lumber contract awarded to J. R. Bowles, Swink, Okla.; plans by Mr. Flekinger; day's labor. (See "Machinery Wanted.")

S. C., Bennettsville.—School trustees have plans by Sayre & Baldwin, Anderson, S. C., for proposed Murchison school; cost \$18,000.

S. C., Columbia.—Richland county will erect school at Waverly, brick, steam heat, cost \$12,000; at Edgewood, school to cost \$7000; S. M. Clarkson, Superintendent of Education.

S. C., McColl.—McColl School District voted \$20,000 bond issue to erect school. Address District School Trustees. (Recently mentioned.)

S. C., Anderson.—Cedar Grove District No. 30 will vote June 25 on \$2500 bond issue for school building. Address R. E. Nicholson, superintendent, Board of Education.

S. C., Six-Mile.—Pickens Baptist Association, Pickens, S. C., Twelve-Mile Baptist Association and Piedmont Baptist Association, Liberty, S. C., are having plans prepared by J. H. Casey, Anderson, S. C., for proposed Baptist High School; plan is to erect 11-room building at present and later boys' and girls' dormitories; Rev. A. E. Brown of Asheville, N. C., will be superintendent.

S. C., Lowryville.—Lowryville School District No. 22, A. W. Lowry, secretary Board of Trustees, will open bids June 27 for erection of school building; 50x62 feet; four rooms; ordinary construction; cost \$4000. (Bond issue of \$4000 recently noted.)

Tenn., Knoxville.—Knox County Board of Education will expend \$3000 for erection of school at Cedar Grove and addition to Bearden School; plans by L. C. Waters, Knoxville; is also having plans prepared by Mr. Waters for \$4000 school at Riverdale.

Tenn., Lebanon.—School directors will soon award contract for remodeling colored school.

Tenn., Knoxville.—East Tennessee Medical College, S. L. Jones, dean, plans remodeling interior of college building, addition of laboratory and dormitory for training nurses.

Tex., Benjamin.—Bids will be received at office of Charles E. Coombs, Benjamin, for erection of two-story-and-basement school; plans and specifications on file at office of Larry & Spler, architects, Sweetwater, Tex., or of Mr. Coombs, as above.

Tex., China.—Jefferson county will issue \$12,000 of bonds to erect school. Address County Clerk, Beaumont, Tex.

Tex., College Station.—Alumni Association of Agricultural and Mechanical College is arranging to erect memorial Young Men's Christian Association building; E. B. Cushing, chairman of committee, Houston, Tex.

Tex., Cooper.—T. E. Gardner, Mayor, will receive bids until June 27 for erection of nine-room-and-basement brick school; plans and specifications on file in Mayor's office after June 27.

Tex., Friona.—Friona Common School District trustees will issue \$12,000 of bonds to erect school.

Tex., Houston.—City Commissioners will have plans prepared by O. J. Lorehn, Temple Bldg., Houston, for eight-room annex to Pan-Indian school, to accommodate 350 children.

Tex., Jefferson City.—Carson & Newman College will erect conservatory of music; cost \$25,000.

Tex., Killeen.—City voted \$14,000 bond issue to erect brick school. Address The Mayor.

Tex., Kyle.—City will vote July 2 on \$8000 bond issue to erect school. Address The Mayor.

Tex., League City.—City voted bond issue to erect \$15,000 school. Address The Mayor.

Tex., Liberty.—City will expend \$5500 to erect school building recently noted; 45x36 feet; stoves; plans by F. S. Glover & Son, Houston, Tex.; bids opened June 22.

Tex., Marshall.—Waller, Shaw & Fields, architects, Fort Worth, Tex., will receive bids until June 30 for erection of brick and concrete high school at Marshall; certified check for 5 per cent. amount of bid; separate bids for plumbing, heating and wiring; plans and specifications at office of architects as above or Board of Education, Marshall.

Tex., Matador.—Matador School Board received bids until June 23 for erection of two-story-and-basement brick and concrete school; steam heat; plans by Taylor & Wolfe, Fort Worth, Tex.

Tex., Mt. Pleasant.—City is proceeding with construction of proposed East Ward school, and will also erect \$20,000 school to replace Central school. Address The Mayor.

Tex., Navasota.—City will vote July 19 on \$20,000 bond issue to erect manual-training school. Address The Mayor.

Va., Chatham.—City will probably vote in July on \$10,000 bond issue to enlarge high-school building and macadamize Main St. Address Town Council.

Va., Creeds.—Rossel Edward Mitchell, architect, Norfolk, Va., will receive bids until June 28 for erection of four-room school and auditorium; O. B. Mears, county school superintendent, Creeds.

Va., Hollins.—Hollins Institute will open bids June 25 for erection of infirmary recently noted; 60x40 feet; brick; mill work; ordinary construction; steam heat; cost \$10,000; plans by Huggins & Bates, Roanoke, Va. Address Joseph H. Turner, general manager.

Va., Middleham.—School Board will receive bids until June 25 for erection of brick and concrete school; certified check for \$200, payable to J. J. Cheatham, clerk; plans and specifications on file at office of Charles M. Robinson, architect, 10th and Main Sts., Richmond, Va.; Haley Cole, chairman.

Va., Norfolk.—Trustees School District No. 6 will receive bids at office of A. H. Foreman, superintendent, until June 28 for erection of eight-room brick and slate roof school near Freitas' Store; certified check for \$200, payable to order of board; plans and specifications on file at office of W. T. Zepp, architect, Norfolk, or B. F. Cartwright, clerk.

Va., Richmond.—Richmond College is having plans prepared by Cram, Goodhue & Ferguson of 170 Fifth Ave., New York, and Boston, Mass., for number of buildings at Westhampton; cost \$500,000. (Previously noted.)

Va., Richmond.—Southern Benedictine Society will erect college at Hanover and Stuart Aves.

Va., Suffolk.—School Board will receive bids until July 12 for erection of brick and concrete school; certified check for \$200, payable to T. W. Artman, clerk; plans and specifications at office of Lee Britt, division school superintendent, Suffolk, and of C. M. Robinson, architect, 10th and Main Sts., Richmond, Va.; separate bids for heating, ventilating and plumbing.

Va., Wytheville.—Evansham School Board will expend \$13,200 to erect school building; 55x105 feet; ordinary construction; hot-air heat; Clarence B. Kearfott, Nickles Bldg., Bristol, Va., recently noted as preparing plans.

W. Va., Parkersburg.—Board of Education has plans by Patton & Daly, Parkersburg, for proposed 12-room school; slow-burning construction; pressed brick; stone trimmings; fireproof hallways; tile floors; cement basement; stone foundation; cost \$25,000 to \$30,000.

STORES

Ala., Montgomery.—S. B. Marks will erect store building; 50x125 feet; four stories; electric lighting; will install sprinkler system; reported to be occupied by Sheurer, Wise & Co.

D. C., Anacostia.—Milton J. Fillius, Congress Heights, Washington, D. C., will erect two-story frame store and stable on Nichols Ave.

Fla., Mort Myers.—H. E. Heltman is having plans prepared by F. Kennard, Tampa, Fla., for four stores.

Fla., Orlando.—McNeill & Davis are having plans prepared by F. Kennard, Tampa, Fla., for business building; two stories; brick; cost \$20,000.

Fla., Sanford.—N. P. Yowell & Co. will erect store building.

Fla., Sanford.—F. L. Woodruff and N. H. Garner will erect store building; two stories; brick.

Fla., Deland.—J. F. Allen & Co. will erect store to replace present building; two stories.

Fla., Tampa.—A. J. Knight will erect two-story pressed-brick store and apartment building; 52x50 feet.

Fla., West Tampa.—A. Simovitz and S. Simovitz will erect two-story business building; front of lower floor plate glass.

Ga., Augusta.—H. H. Cummings will erect three stores; one story; cost \$5600.

Ga., Atlanta.—Realty Building & Investment Co., D. R. Creecy, Jr., president, Richmond, Va., has plans by P. Thornton Mayre, Atlanta, for proposed arcade building; 90½x406 feet; two stories at present; will erect three to eight additional stories later; roof garden; picture theater in rear; tile floors; cost \$250,000.

Ga., Augusta.—B. R. Tillman will erect store building; three stories; brick; cost \$12,000.

Ga., Donaldsonville.—T. J. Shingler will erect four brick store buildings.

Ga., Hawkinsville.—H. H. Miller will erect business building; three stories; brick.

Ky., Hyden.—W. G. Begley will rebuild store building recently burned; 24x56 feet; two stories and basement; brick; correspondence with builders and contractors is desired.

La., New Orleans.—E. Rosenberg will erect business building; two stories; brick; cost \$5050.

Md., Baltimore.—Henry Adams, 859 Calvert Bldg., Baltimore, is consulting engineer for building recently noted to be erected by Hochschild, Kohn & Co., Howard and Lexington Sts.; eight stories; steel and concrete; fireproof construction; vacuum system of heating; electric lighting; hydraulic elevators; plans by Joseph Evans Sperry, Calvert Bldg., Baltimore.

Md., Baltimore.—Thomas O'Neill of O'Neill & Co., Charles and Lexington Sts., purchased building at Charles and Franklin Sts. and will remodel for business.

Miss., Lauderdale.—L. C. Smith will erect brick store building.

Miss., Lauderdale.—W. A. Lyle will erect brick store building.

Miss., Lauderdale.—Rosenbaum & Little will erect brick store building.

Miss., Meridian.—Tom Lyle Grocery Co. will rebuild store building recently reported burned; 175x150 feet; reinforced concrete; three stories.

Mo., St. Louis.—Washington University is arranging to erect store for Friedman-Shelby Shoe Co.; seven stories and basement; reinforced concrete; 69,000 square feet floor space; frontage 50 feet; cost \$175,000. (Recently mentioned.)

N. C., Durham.—Salmon & Salmon will erect two-story store and office building; cost \$4500.

N. C., Wilmington.—Mrs. M. A. Masten will erect business building.

S. C., Barnwell.—James M. Caldwell will expend \$3000 to erect store building recently noted; 28x100 feet; brick; construction will not begin for some months.

S. C., Barnwell.—Geo. H. Bates contem-

plates erection of \$4000 store building recently noted; 32x125 feet; ordinary construction.

S. C., Olathe.—C. F. Rizer will erect store building; two stories; brick; 50x130 feet.

Tenn., Chattanooga.—T. L. Montague will erect brick business building; cost \$3500.

Tenn., Chattanooga.—B. M. Garrett, 105 Read Ave., is having plans prepared for brick mercantile building; 22x110 feet; two stories; composition roof; gas and electric lighting; second floor will be 22x75 feet.

Tenn., Memphis.—G. Barasso will erect store and office building and store and dwelling; two stories; brick; concrete foundation; cost \$7000 each.

Tenn., Morristown.—H. H. Rice will erect business building; concrete, finished in imitation granite; 50x50 feet; two stories and basement.

Tex., Dallas.—Williams & Hyman will erect store building to replace burned structure; 60x80 feet; brick; cost \$4000.

Tex., Fort Worth.—J. C. Ingram will erect business and office building; two stories; brick; 75x100 feet; ordinary construction; gas heating; gas and electric lighting; plans by Sanguinetti & Staats, Fort Worth, Tex.; construction by owner.

Tex., Mercedes.—Hester & Roberts will erect brick business building; cost \$7000.

Tex., Hearne.—I. I. Rosenstein will receive bids for tearing down and rebuilding brick building; 25x105 feet.

Tex., Rochelle.—Marting Hardware & Furniture Co. will erect business building; 55x120 feet.

Tex., Uvalde.—E. B. Zachary Company will erect brick business building.

Tex., Snyder.—A. C. Wilmett will expend \$1500 to erect store building recently noted; 30x125 feet; cement floors; metal ceiling; electric lighting; construction by owner. (See "Machinery Wanted.")

Tex., Victoria.—Ben Dreyfus will soon let contract for erection of store building recently noted; 100x50 feet; one story and basement; ordinary construction; electric lighting; hand elevator; cost \$8000; plans by Jules Leffland, Victoria. Address architect.

Va., Norfolk.—Benjamin F. Mitchell, architect, Norfolk, is preparing plans for two one-floor-and-loft stores at 127 College Pl.

Va., Norfolk.—C. W. Fentress has plans by J. K. Peebles, Norfolk, for business building; five stories; red brick; four stores on ground floor.

Va., Portsmouth.—Emmerson estate will erect business buildings.

Va., Portsmouth.—Mrs. Ellis Butt will erect three brick stores.

Va., Portsmouth.—L. Kootz will erect four brick stores; two stories; 80x90 feet.

Va., Portsmouth.—Max Steinman will erect store building; 40x90 feet; three stories.

W. Va., St. Albans.—Knights of Pythias, Ivanhoe Lodge, No. 71, will receive bids until June 23 for erection of three-story building; 44x85 feet; brick; first floor stores, second offices, and third lodge hall; wood floors; natural-gas heating; gas and electric lighting; cost \$13,000; plans by Smith Bros., Huntington, W. Va. Address proposals to W. L. C. Allen.

THEATERS

Ark., Little Rock.—J. G. Higgins and Frank J. Head of Hot Springs, Ark., purchased Capital Theater; will expend \$15,000 for improvements; plans by George Kennerly, St. Louis, Mo.; decorating by William Ekart, Chicago, Ill.

Ark., McGehee.—McGehee Hotel & Opera-house Co. incorporated with \$10,000 capital stock; L. W. Hyon, president; G. B. Ewing, vice-president; Scott McGehee, treasurer; M. A. Tucker, secretary.

Fla., New Smyrna.—M. L. Wiginton will erect two-story reinforced building; second floor for opera-house, 60x90 feet, and offices.

Miss., West Point.—Benevolent and Protective Order of Elks plans erection of \$25,000 opera-house.

Tenn., Knoxville.—Frank Rogers will either remodel buildings at 703-05 Gay St. for theater or erect theater to replace them; seating capacity 1000.

Tex., Mt. Pleasant.—S. W. Webber purchased building; will remodel for opera-house.

WAREHOUSES

Ala., Birmingham.—Birmingham Grain Co., Ernest B. Redd, manager, will erect warehouse; reinforced concrete; 140x150 feet; two stories; contract will soon be awarded.

Ala., Demopolis.—E. B. Barnes will erect fireproof brick warehouse.

Ala., Montgomery.—Bozeman Warehouse & Storage Co. incorporated with \$10,000 capital stock by R. H. Bozeman, Mead G. Bozeman and Millard M. Bozeman.

Ala., Montgomery.—R. H. Bozeman will erect \$15,000 warehouse.

Ala., Montgomery.—James H. Hardaway and G. W. Covington (recently noted to organize company) will not erect warehouse as previously stated; has building.

Fla., Tampa.—A. R. Swann contemplates erection of warehouses in connection with building of docks. (See "Miscellaneous Construction.")

Ga., Augusta.—Augusta Broom Works will erect two-story brick warehouse to cost \$4500. (Recently mentioned.)

Ga., Ty Ty.—T. V. Williams and J. M. Varner will erect brick cotton warehouse; construction begun.

Md., Baltimore.—Mrs. Susan Roddy, 443 East 22d st., awarded contract to John J. Moylan, 117 East Center St., Baltimore, to erect warehouse at Holliday and Center Sts.; three stories; brick; 40x47 feet; slag roof; cost \$3000; McShane Bell Foundry Co., occupant.

Md., Gwynnbrook.—Gwynnbrook Distilling Co. will rebuild warehouse recently reported collapsed; seven stories, and probably of iron.

Mo., St. Louis.—A. and A. Kilpatrick will, it is reported, erect two-story warehouse at 1706 South 12th St.; cost \$4000.

N. C., Greenville.—American Tobacco Co. of New York will erect warehouse.

S. C., Marion.—Union Storage Warehouse Co., recently reported incorporated with \$10,000 capital stock, has elected S. G. Miles, president; J. D. Montgomery, vice-president; O. K. LaRoque, secretary-treasurer; will erect warehouse of three compartments each for 3000 bales; separated by fireproof walls.

S. C., Spartanburg.—Shockey & Bull will erect warehouse; 56x112 feet; two stories.

Tex., Houston.—Westheimer Warehouse Co. incorporated with \$6000 capital stock by S. J. Westheimer, Ben S. Hurwitz and Adolph Westheimer.

Tex., Houston.—R. E. Brooks of the Texas Company is having plans prepared by C. D. Hill & Co., Wilson Bldg., Dallas, Tex., for warehouse at Commerce Ave. and Crawford St.; three stories; 100x100 feet; mill construction; first floor to contain blacksmith shop, etc.; upper floors to be used for storage of wagons and carriages; estimated cost, \$40,000; E. F. Glick, representative of C. D. Hill & Co., will soon receive bids.

Tex., Quanah.—Quanah Compress & Warehouse Co., T. F. West, president-manager, will open bids at once for erection of \$10,000 warehouse. (See "Cotton Compresses and Gins.")

Va., Richmond.—American Terminal Warehouse Corporation has plans by D. I. Davis, Chicago, Ill., and Carneal & Johnston, Richmond, for warehouse; 50x100 feet; fireproof; electric lighting; cost \$30,000.

Va., Richmond.—Standard Paper Manufacturing Co. will erect warehouse; two stories; brick and concrete; 80x200 feet; estimated cost, \$20,000; plans by Carneal & Johnston of Richmond; bids are being received.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Okl., Tulsa.—P. M. Iverson has plans by and awarded contract to J. B. Barber (address, care of Mr. Iverson) for erection of apartment-house; 40x90 feet; two stories and basement; brick; cost \$15,000. (Recently noted.)

Tenn., Chattanooga.—L. L. Swan, address, care of Davenport Bros., awarded contract to C. H. Brown & Co., Chattanooga, for erection of apartment-house recently noted; 16 rooms; two stories; brick; composition roof; hard pine interior finish; hot-water heat; gas and electric lighting; cost \$7500; plans by Huntington & Sears, James Bldg., Chattanooga.

ASSOCIATION AND FRATERNAL

La., Jena.—Ancient Free and Accepted Masons have plans by and awarded contract to C. D. Stewart, Baton Rouge, La., for erection of proposed lodge building; fireproof construction; cost \$5000.

BANK AND OFFICE BUILDINGS

Fla., Panama City.—Panama City Bank awarded contract to A. C. Crawford, Dothan, Ala., to erect bank building; two stories; 29x70 feet; pressed brick; cost \$8000.

La., Marksville.—Union Bank awarded contract to A. N. Zimmer, Marksville, for erection of proposed \$5000 bank building; plans by contractor; 25x50-foot brick structure; materials supplied.

N. C., Ansonville.—Bank of Ansonville awarded contract to J. S. Stearns, Charlotte, N. C., to erect bank building.

Tex., Como.—Como State Bank, W. L. Walker, cashier, awarded contract to G. W. Wilson (address care of bank) for erection of proposed bank building; 25x50 feet; fireproof construction; stoves; cost \$2500; plans by E. M. Hodge (address care of bank).

Tex., El Paso.—Anson Mills, 2 Dupont Circle, Washington, D. C., awarded contract to H. L. Stevens & Co., El Paso, for erection of office building recently noted; 12 stories and basement; 165x80 feet; reinforced concrete; heating plant to cost \$7000; electric elevator; building to cost \$20,000; plans by Trost & Trost, El Paso.

Tex., Hillsboro.—First State Bank awarded contract to Hewitt Construction Co., Dallas, Tex., to erect bank building; three stories and basement; pressed brick; stone trimmings; banking-room on first floor and basement to have tile floors; first story to have 18-foot ceiling; baths, etc., in basement, bank on first floor and offices on upper floors; steam heat; plans by Sanguinetti & Staats, Houston, Tex., and other cities. (Recently mentioned.)

Va., Lynchburg.—Drs. Clark and Hubbard awarded contract to Mr. McD. Landrum of Lynchburg to erect office building; three stories and basement; tapestry brick; terracotta cornices; tile roof; ordinary construction; steam heat; cost \$18,600; plans by McLaughlin, Pettit & Johnson of Lynchburg. (Recently mentioned.)

CHURCHES

Ky., Georgetown.—Baptist Church awarded contract to G. H. Nunney Company, Georgetown, to erect Sunday-school addition and enlarge auditorium of church building; 40x45 feet; two stories; brick; ordinary construction; steam heat; cost about \$5500; plans by E. M. Stamler, Lexington, Ky. (Recently mentioned.)

N. C., Newbern.—Tabernacle Baptist Church, A. C. Shuler, pastor, has plans by and awarded contract to J. T. Ross, Newbern, for remodeling and enlargement of edifice recently noted; steam heat; gas lighting; cost \$2500.

Okl., Oklahoma City.—First Presbyterian Church awarded contract to Gross Construction Co. of Oklahoma City to erect edifice; 90x122 feet; fireproof; cost \$100,000; plans by Smith & Parr, 412 Oklahoma Bldg., Oklahoma City. (Recently mentioned.)

Tenn., Nashville.—Pentecostal Chapel, 125 Fourth Ave. North, awarded contract to J. O. McClurkin of Nashville to erect brick addition to edifice; cost \$4000.

Tenn., Winchester.—Board of trustees, Winchester Presbyterian Church, awarded contract to T. N. Scott, Winchester, for erection of edifice previously noted; 41x67 feet; ordinary construction; furnace heat; electric lighting; cost \$9000; plans by W. A. Cann, St. Louis, Mo.; bids opened on woodwork June 22.

Tex., Teague.—Catholic Church awarded contract for erection of edifice. Address Rev. Father Gallagher, Hearne, Tex.

CITY AND COUNTY

S. C., Florence.—Jail.—City Council awarded contract at \$6750 to Johnson-Matthews Company, Florence, for erection of jail; plans by W. J. Wilkins, Florence. (Recently mentioned.)

S. C., Greenville.—Poorhouse.—County Poorhouse Commission awarded contract at \$7250 to Ebaugh & Ebaugh, Greenville, for erection of two buildings at county poorhouse; 235x18 feet and 85x18 feet; brick; plans by J. E. Sirrine, Greenville. (Recently noted.)

W. Va., Wheeling.—Stable.—City awarded contract at \$4295 to A. C. Fisher, Wheeling, for erection of stable; structure will be 54x76 feet; ordinary construction; plans by Building Inspector, Wheeling.

COURTHOUSES

Ala., Selma.—Court of County Revenues awarded contract to J. G. Norris, Selma, for improvements to courthouse.

DWELLINGS

Ala., Birmingham.—Blinn Estate Improvement Co. awarded contract to C. R. Clemence, Empire Bldg., Birmingham, for erection of two dwellings recently noted; two stories; ordinary construction; frame and con-

crete; hot-air furnace; electric lighting; cost \$3250 each.

Ala., Corey.—Corey Land Co., Robert Jemison, Jr., president, 204 3d St., Birmingham, Ala., awarded contract to J. B. Anderson & Co., Birmingham, for erection of 10 dwellings; cost \$2000 each. (Recently noted.)

Ark., Little Rock.—J. B. Sandefur awarded contract to Norwood & Skinner, Little Rock, for erection of residence; two stories; brick; cost \$4000.

Ark., Little Rock.—Mrs. T. D. Crawford awarded contract to J. W. Calk, Little Rock, for erection of dwelling; two stories; frame; cost \$3000.

Ark., Little Rock.—C. D. Bracey awarded contract to A. C. Larr, Little Rock, for erection of dwelling; two stories; frame; cost \$3000.

Ark., Pine Bluff.—R. H. Stearns awarded contract to Monk & Ritchie, Pine Bluff, for erection of residence.

D. C., Washington.—James C. Nealon, 23 Northeast Market, awarded contract to A. Thompson, Washington, for erection of four dwellings at 909-15 10th St. N. W.; cost \$3000; plans by owner.

D. C., Washington.—District Construction Corporation awarded contract to Wm. C. Blundon, 15 Rhode Island Ave. N. W., Washington, for erection of 12 three-story brick dwellings at 26-48 G St. S. W.; cost \$80,000; plans by A. B. Mullett & Co., Union Trust Bldg., Washington.

D. C., Washington.—W. F. Collins and R. C. Hess have plans by C. E. Webb, Warder Bldg., Washington, for proposed five dwellings; four will be 16x53 feet; one 32x36 feet; ordinary construction; hot-water heat; gas and electric lighting; cost \$3200 each; construction by Mr. Hess.

D. C., Washington.—C. M. Croswart awarded contract to Harper & Kendall, Washington, for erection of two dwellings at 2824-26 Cathedral Ave. N. W.; three stories; brick; cost \$14,500; plans by Frederick A. Fletcher, 1413 G St. N. W., Washington.

D. C., Washington.—John P. Fillebrown, 1377 H St. N. W., awarded contract to L. H. Emmert, 1110 15th St. N. W., Washington, for erection of dwelling at 2121 Leroy St. N. W.; three stories; brick; cost \$12,000; plans by Marsh & Peter, 520 13th St. N. W., Washington.

D. C., Washington.—W. F. Collins awarded contract to R. C. Hess, 115 Tennessee Ave. N. E., Washington, for erection of dwelling at 137 Kentucky Ave.; two stories; brick; cost \$3000; plans by C. E. Webb, Washington.

Fla., Tampa.—G. W. Judy awarded contract to Jordan Bros., Tampa, for erection of residence.

Ga., Hawkinsville.—W. V. Merritt awarded contract to Mr. Willis, Hawkinsville, for erection of two-story residence; cost \$5000.

Ga., Savannah.—M. T. Respass awarded contract to W. A. Wimlish, Savannah, for erection of dwelling recently noted; five rooms and laundry; stucco; metal shingles; hot-air heat; gas and electric lighting; cost \$4000; plans by Wallin & Young, Savannah.

La., Baton Rouge.—E. M. Jolly awarded contract for erection of residence.

Md., Baltimore.—Martin Meyer has plans by and awarded contract to Emil J. Klemm & Co., 225 Law Bldg., Baltimore, for erection of dwelling recently noted; 29x34 feet; mill construction; hot-water heat; electric lighting; cost \$4000. (See "Machinery Wanted.")

Md., Ellicott City.—Jacob F. Gerwig, architect, 210 East Lexington St., Baltimore, Md., awarded contract to Jacob Kirn & Sons, Main Ave., Ellicott City, for rebuilding Gillett residence; dwelling will be 51x42 feet; ordinary construction; steam heat; electric lighting; cost \$8000.

Md., North East.—G. Lelper Winslow awarded contract to John Sheridan, 806 North Carrollton Ave., Baltimore, Md., for erection of two dwellings; two and a half stories.

Tenn., Memphis.—Robert Galloway has plans by Johnston & Matthews (address care of Mr. Galloway) for two dwellings; one eight rooms; stone and brick veneer; slate roof; cost \$7000; the other pebble-dashed; tile roof; cost \$6000; hot-air heat; electric lighting; contract recently noted awarded to J. E. Wright, 697 Woodlawn St., Memphis, Tenn.

Tenn., Memphis.—Mrs. R. L. Shepherd awarded contract to D. M. Crawford Company, Memphis, for erection of dwelling recently noted; 10 rooms; brick and stucco; cost \$10,000.

Tenn., Memphis.—W. A. Smith, 310 Memphis Trust Bldg., awarded contract to Meacham & Hill, 2000 Courtland Ave., Memphis, for erection of colonial dwelling re-

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cently noted; 46x50 feet; two stories and attic; brick veneer; hot-water heat; slate roof; cost \$9500; plans by H. T. McGee, Schmitz Bldg., Memphis.

Tenn., Nashville.—James D. Porter awarded contract to G. W. McClanahan & E. T. Lewis Company, Nashville, for erection of residence; seven rooms; hardwood floors; cement front porch; furnace heat; cost \$2500; plans by Thomas S. Marr, Nashville.

Tenn., Nashville.—M. C. Cayce awarded contract to J. A. Proctor, Nashville, for erection of dwelling recently noted; ordinary construction; grates; gas and electric lighting; cost \$3500; plans by T. J. Biggers, Nashville.

Tex., Bastrop.—Alf Griesenbeck awarded contract for erection of residence.

Tex., Bastrop.—J. H. Percy of Percy & Booth awarded contract for erection of residence.

Tex., Sulphur Springs.—C. C. Crosby awarded contract for erection of residence.

Va., Norfolk.—J. W. Manning awarded contract to B. L. Nichols, Norfolk, for erection of frame dwelling; cost \$5500.

Va., Norfolk.—C. F. Burroughs awarded contract to Baker & Brinkley, Norfolk, for erection of dwelling; cost \$24000.

Va., Portsmouth.—F. M. Wilder awarded contract to R. K. Revel, Portsmouth, for erection of two story brick and frame dwelling; cost \$3090.

GOVERNMENT AND STATE

N. C., Fort Caswell.—Buildings.—Government awarded contract to Furpess & Newton, Southport, N. C., to erect ordnance shop; James H. Brinson, Hampton, Va., to erect officers' quarters (as lately reported) and C. T. Taylor, Hampton, Va., for heating and plumbing.

HOTELS

D. C., Washington.—G. F. Schutt awarded contract to Broyer & Smith, 214 12th St. N. W., Washington, for repairing hotel at 14th and F Sts. N. W.; cost \$15,000; plans by George P. Hales, 1939 17th St. N. W., Washington.

Miss., Vicksburg.—Hotel Piazza awarded contract to H. H. Havis, Vicksburg, for rebuilding hotel; will convert two stores on lower floor for lobby, install vitreous-tile floors; replace present stairways with new ones; new wainscot and marble base in dining-room; erect marble in front; steam heat, etc.; cost of improvements, \$75,000.

Tex., Galveston.—Galveston Hotel Co. awarded contract to James Stewart & Co., St. Louis, Mo., for erection of hotel; 250 rooms; six stories; reinforced concrete; fireproof; U-shaped; supported by 650 piles 35 feet long and driven into ground entire length; cost \$750,000. (Recently mentioned.)

Tex., Stamford.—J. R. Cargill awarded contract for erection of hotel; 53 rooms; frontage 82½ feet; plans by S. B. Elliott, Stamford. (Previously mentioned.)

MISCELLANEOUS STRUCTURES

Md., Baltimore.—Grandstand.—Johns Hopkins University awarded contract to Baltimore Ferro-Concrete Co., 16 St. Paul St., Baltimore, to erect grandstand at Homewood; seating capacity, 2000; estimated cost, \$10,000; plans by Parker, Thomas & Rice, 1100 Union Trust Bldg., Baltimore. (Recently mentioned.)

Tenn., Knoxville.—Exposition Building.—Appalachian Exposition Co., Arnstein Bldg., awarded contract to L. A. Galyon, Knoxville, for erection of exposition building; 80x100 feet; ordinary construction; electric wiring (not in general contract); cost \$2500; plans by R. T. Graf, Knoxville. (Recently noted.)

Tenn., Knoxville.—Grandstand.—Appalachian Exposition Co., Arnstein Bldg., awarded contract to A. R. Ogle of Knoxville to enlarge grandstand at Johnson race track. (Recently mentioned.)

W. Va., Montgomery.—Business.—G. W. Champe awarded contract, it is reported, to Newland & Trimble, Fayetteville, W. Va., to erect business block.

RAILWAY STATIONS

Tenn., Memphis.—Memphis Union Station Co. awarded contract to Murch Bros. Construction Co., St. Louis, Mo., to erect union depot for Louisville & Nashville; Nashville, Chattanooga & St. Louis, Southern, Cotton Belt and Iron Mountain railroads; main building three stories high, 100x300 feet; express building one story high, 40x200 feet; concourse two stories high, 75x240 feet; construction of steel with hollow-tile arches; outside of Bedford stone; cost \$600,000;

architect, W. H. Courtenay, chief engineer of Louisville & Nashville Railroad, Louisville, Ky. (Previously mentioned.)

W. Va., Grafton.—Baltimore & Ohio Railroad Co. awarded contract to J. J. Walz & Son, 1533 Maryland Ave., Baltimore, Md., for erection of passenger station previously mentioned; fireproof structure; 140x50 feet; two stories and basement; cost \$125,000; heating plant to cost \$3000; M. A. Long, architect, Baltimore & Ohio general offices, Baltimore.

SCHOOLS

Ala., Attalla.—City awarded contract at \$9000 to H. M. Johnson, Gadsden, Ala., for erection of school; brick; two stories. (Previously mentioned.)

Ark., Dumas.—School Board awarded contract at \$6800 to Blythe Bros., Dermott, Ark., for erection of brick school; plans by and construction under supervision of Clyde A. Ferrell, Little Rock, Ark.; is having plans prepared for two-story frame negro school.

Ark., Little Rock.—City awarded contract to J. D. Brock, Little Rock, for erection of annex to Mitchell School; cost \$15,000.

Ark., Magnolia.—Agricultural School Board awarded contract at \$45,800 to Stewart-McGee Construction Co., Little Rock, Ark., for erection of agricultural college; main building 60x120 feet; brick; two stories and basement; dormitories to accommodate 50 boys and 30 girls; plans by Theo. M. Sanders, Little Rock, Ark. (Previously noted.)

Ark., Monticello.—Agricultural School Board awarded contract at \$44,100 to Stewart-McGee Construction Co., Little Rock, Ark., for erection of agricultural school; main building 60x120 feet; two stories and basement; dormitories to accommodate 50 boys and 30 girls; brick construction; plans by Theo. M. Sanders, Little Rock, Ark. (Previously noted.)

Fla., Sanford.—City awarded contract to Geo. B. Pope, Sanford, for erection of high-school building; cost \$20,000; plans by W. B. Talley, Jacksonville, Fla.

Ga., Atlanta.—Agnes Scott College awarded contract to F. Granly & Son, Atlanta, for erection of science building; 52x192 feet; three stories and basement; brick; stone trimmings; cost \$25,000; plans by Morgan & Dillon, Atlanta. (Previously noted.)

Miss., Jackson.—Jackson Deaf & Dumb Institute awarded contract for erection of building for negro inmates, also for repairs to main building; cost \$25,000; plans by R. H. Hunt, Chattanooga, Tenn. (Previously noted.)

Miss., Purvis.—Board of Trustees, Lamar county, awarded contract to T. C. King, Purvis, for erection of proposed Agricultural High School; two stories; 44x62 feet; frame; cost \$3173.25.

N. C., Asheville.—Board of Aldermen awarded contract to Levi E. Powers, Rutherfordton, N. C., for erection of graded school; cost \$500.

N. C., High Point.—City awarded contract to Montgomery Bros., High Point, for erection of school.

Tex., Arp.—Arp Independent School District awarded contract to Whitlock & Ballow, Troup, Tex., for erection of school building recently noted; 48x60 feet; cost \$4000; plans by James Bothwell, Tyler, Tex.

Tex., Devine.—City awarded contract to Atkins & Moss (address, care of School Board) for erection of addition to high-school building; two stories; brick; cost \$6000; plans by R. O. Langworthy, 608 Virginia Ave., San Antonio, Tex. (Previously noted to have voted \$6000 bond issue.)

Tex., Farwell.—Trustees Farwell Independent School District awarded contract to O. G. Roquemore, Amarillo, Tex., for erection of school; brick construction; cost \$17,000.

Tex., Luling.—City awarded contract at \$9520 to Hayes Tadlock, Luling, for erection of school.

Va., Richmond.—Catholic Church awarded contract to John Amrhein & Bros., Richmond, for erection of mission school to be known as Van de Vyver School for Colored Children; 124x86 feet; plans by C. M. Robinson, 10th and Main Sts., Richmond.

STORES

Ala., Birmingham.—Wimberly-Thomas Hardware Co. awarded contract to H. A. Stockmar, Birmingham, for erection of store building; five stories; 30x182 feet; mill construction; gas and electric lights; composition roof; passenger and freight elevators; cost

\$50,000; plans by Warren & Welton, 1607 Empire Bldg., Birmingham. (Previously mentioned.)

Ala., Fort Payne.—J. B. Harlason awarded contract to Alton Park Lumber Co., Chattanooga, Tenn., for erection of four stores; brick; cost \$8000.

Ark., Dumas.—A. Isom and W. F. Puryear awarded contract for erection of double brick store building.

D. C., Washington.—P. H. Shee & Co., 7th St. and Florida Ave. N. W., awarded contract to De Lacey Construction Co., Washington, for repairing buildings at 2202-4 Georgia Ave. and 703 Florida Ave.; cost \$14,000; plans by Julius Germueller, 456 Louisiana Ave. N. W., Washington.

Fla., Jacksonville.—Carl Schrebnick awarded contract to W. E. Poland, Jacksonville, for erection of business building; two stories; cement; 60x50 feet; plate-glass store windows on lower floor; plans by W. W. Maughin, Jacksonville.

Fla., West Palm Beach.—Carl Schrebnick awarded contract to W. E. Poland, West Palm Beach, for erection of business building; two stories; concrete; 60x50 feet.

Md., Baltimore.—Eltmiller Bros., Hollins St. and Arlington Ave., awarded contract to John A. Sheridan, 806 North Carrollton Ave., Baltimore, for erection of store building; three stories; 40x64 feet; brick; slag roof; cost \$9000; plans by C. M. Anderson, 314 North Charles St., Baltimore. (Recently mentioned.)

Miss., Tyertown.—E. L. Reeves has plans by and awarded contract to W. W. Easley (address, care of Mr. Reeves) for erection of proposed store building; 30x30 feet; cost \$3000.

S. C., Sumter.—Wilson & Rowland awarded contract for erection of two stores; 32x60 feet; plans by J. H. Johnson, Sumter.

Tex., Fulshear.—Fulshear Mercantile Co. awarded contract to Albert & Fuess, Cuero, Tex., for erection of mercantile building; one story and basement; 80x150 feet; electric lighting; hand-power elevator; cost \$24,000; plans by Jules Leffland, Victoria, Tex. (Recently noted.)

Tex., Paducah.—Jordan Bros. awarded contract to Benton & Taylor, Paducah, for erection of store recently noted; 50x50 feet; mill construction; brick; cost \$10,000; plans by Hardin Bros., Farmersville, Tex.

Tex., Snyder.—J. H. Sears awarded contract to G. B. Black, Snyder, for erection of store building recently noted; 30x125 feet; mill construction; electric lighting; cost \$4500.

Tex., Victoria.—George Diesbach awarded contract for erection of store building; two stories; brick.

THEATERS

W. Va., Charles Town.—Mrs. Wm. P. Packett awarded contract to Hugh P. Cline, Charles Town, for erection of opera-house; 60x106 feet; brick; Ohio sandstone and metal trimmings; plans by T. E. Mullett, Charles Town.

WAREHOUSES

Fla., Jacksonville.—D. J. Rose & Co., contractors, Rocky Mount, N. C., have completed erection of warehouse for Dutton Phosphate Co.; contract awarded some time since. (Lately mentioned.)

Md., Baltimore.—R. W. Norris & Sons, 346 North Gay St., will expend about \$20,000 to erect warehouse recently mentioned; 33x52 feet; five stories; ordinary construction; plans by Robert C. Ulrich, 72 Gunther Bldg., Baltimore; contract awarded to Charles S. Stockhausen, National Marine Bank Bldg., Baltimore.

S. C., Simpsonville.—Simpsonville Cotton Mills awarded contract for erection of two warehouses to Gallivan Building Co., Greenville, S. C.

Va., Danville.—American Tobacco Co. of New York awarded contract to Harwood & Moss, Newport News, Va., to erect tobacco warehouse; 90x375 feet; cost \$60,000.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Anniston.—A report from Tallapoosa, Ga., says that the Baker Construction Co., headed by H. F. Baker, has the contract for reconstruction on the Vanderbilt Timber, Mining & Southwestern Railway recently purchased by Chas. W. Eckert of Lancaster, Pa., and others. As previously reported, the road will probably be extended.

Ala., Gadsden.—The Seaboard Air Line, it is reported, is preparing to build a line from Odenville to Gadsden, 34 miles. W. L. Seddon is chief engineer at Portsmouth, Va.

Ala., Leeds.—Concerning the report that engineers were surveying and it was contemplated to build a railroad to enter the Cahaba coal fields at Malone, four miles from Leeds, one of the interested parties says that the plan has not yet taken definite shape. The Alabama Fuel & Iron Co., Birmingham, Ala., is interested.

Ark., Greenwood.—An officer of the Missouri Pacific Railway denies the press report that the company will soon begin construction of its Greenwood Branch to Gurdon, Ark.

Ark., Magnolia.—A letter to the Manufacturers' Record denies the report that an electric railway will be built from Magnolia to the Agricultural School and Magnesia Springs.

Ark., Magnolia.—The Gulf & Magnolia Railroad Co. will build 125 miles of line from Junction City to De Queen, Ark., via Magnolia, Waldo, Bodcaw, Hope, Columbus, Mineral Springs and Locksburg. The country is slightly rolling. Company not yet ready to name date for receiving bids. The directors are: President, S. Q. Sevier; vice-president, J. H. Beck, both at Hope, Ark.; treasurer, J. L. Davis, Magnolia, Ark.; secretary, P. A. Tharp; N. Y. Foster, both at Hope; J. M. Witt and Henry Stevens of Magnolia; Charles Clark and C. A. Kennedy of Waldo.

Ark., Stuttgart.—John Scott & Sons of St. Louis, contractors, are reported preparing to begin construction near Stuttgart, on the Central Arkansas & Eastern Railroad, 30 miles long, to connect Stuttgart with Englewood, Ark. The company, it is said, has increased its capital from \$880,000 to \$1,100,000 to provide for the construction. R. N. Foster is president.

Ark., Sedgewick.—The Cache Valley Railroad, 12 miles long, is reported reorganized, and it is understood that an extension of about 18 miles to Paragould will be made. A. D. Goldman of St. Louis is president; G. W. L. Brown is general manager at Sedgewick, Ark. The other directors are J. D. Goldman of St. Louis, S. C. Dowell of Walnut Ridge, Ark., and A. D. Bertig of Paragould, Ark.

Fla., Tampa.—The Seaboard Air Line, it is reported, will begin work immediately on an extension from Sarasota to Venice, Fla., 21 miles, the contractors being Kibler & Anderson of Dunnellon, Fla.; another extension is from Nichols to Mulberry, six miles, on which grading is done, and a third extension is from Dunnellon to Herndon, 13 miles, which is almost completed. W. L. Seddon is chief engineer at Portsmouth, Va.

Ga., Bowden.—Construction is reported begun on the Bowden Railroad, to be about 12 miles long from Bowden to a point on the Central of Georgia Railway, between Bremen and Mandeville.

Ga., Milltown.—The Milltown Lumber Co., it is reported, proposes to extend its line eight miles from Milltown to Rembs, Fla., on the Georgia & Florida Railway.

Ga., Springfield.—The Brinson Railroad Co. has been granted authority to issue \$1,000,000 of common stock, \$500,000 of preferred stock and \$420,000 in bonds to be used for its proposed extension to Athens and improvements. Geo. M. Brinson is president.

Ky., Horse Cave.—Louis Edwards, 1461 Arlington Ave., St. Louis, Mo., confirms the report that he is promoting the Horse Cave & Eastern Railway Co. for a line 25 miles long from Horse Cave, Ky., via Hiseville and Knob Lick to Edmondson, Ky.; two single-span bridges required; country is rolling; no particularly heavy work; expected to begin survey next month; it is intended to finally extend east to Burkesville; organization not perfected.

Ky., Hyden.—A letter to the Manufacturers' Record says that engineers have made survey for a railroad along streams in Leslie county, and the chief engineer is quoted as saying that they are under the instructions of the Ferguson Construction Co. of Cincinnati.

Ky., Whitesburg.—F. D. Buskirk is reported surveying for an extension of the Lexington & Eastern Railroad through Letcher county, beginning at Cornettsville and following the north fork of the Kentucky River to the Elkhorn coal fields. He is quoted as saying that construction will begin shortly. W. A. McDowell is general manager, and John Marston, Jr., is chief engineer, both at Lexington, Ky.

La., Loreauville.—A dispatch says that survey has been made by the New Iberia &

Northern Railroad Co. from Loreauville to Lake Dauterive. H. A. Ganung is chief engineer at New Iberia, La.

La., Monroe.—The Ouachita Development Co. of New York is reported to have completed preliminary work to construct a railroad from Monroe to Farmersville, La., about 25 miles, and thence to points in Arkansas. Survey has been made. Two long steel bridges will be required, one over the Ouachita River. D. H. Nichols of Monroe is said to represent the company.

La., New Orleans.—An officer of the New Orleans, Mobile & Chicago Railroad denies the report that it will be interested with the Hinton-White Lumber Co. of New Orleans in a proposed railroad to connect New Orleans with Mobile.

La., Winnesho.—J. W. Kesterson of Arkansas, who is building a sawmill at Baskin, La., proposes to build 25 miles of logging railroad to develop land purchased from Frank B. Hayne. He says that most of the material has been bought.

Md., Cumberland.—An officer of the Baltimore & Ohio Railroad is quoted as saying that contracts on the Cumberland Division were recently awarded as follows: For third track from West End to Hardman with open cut at Murray Tunnel; third track from Deer Park to Mountain Lake Park; third track from Swanton to Altamont and Frankville, to Charles A. Simms & Co., Harrison Bldg., Philadelphia, who, as previously reported, have the contract for the Grafton (W. Va.) yards. Allen & Kefauver, Equitable Bldg., Baltimore, have the contract for third track from Terre Alta to Rodemer, with open cut at McGuire's tunnel. Charles F. King & Co., Land Title Bldg., Philadelphia, have the contract for third track from Sir John's Run, W. Va., to Great Cacapon. F. H. Clement & Co., Land Title Bldg., Philadelphia, have contract for revision of line and grade at cut No. 58. James F. McCabe Company, Equitable Bldg., Baltimore, has contract for open cut at Rodemer Tunnel. The Eyre-Shoemaker Company, Inc., 900 Arcade Bldg., Philadelphia, has contract for open cut at Everetts Tunnel. A. W. Thompson is chief engineer for the railroad at Baltimore.

Miss., Batesville.—The Batesville Southwestern Railroad Co. will build a line 15 miles long from a connection with the Illinois Central at Batesville to a point on the south bank of the Yocoma River in Tallahatchie county, Mississippi. Location survey is just begun. A. S. Baldwin is chief engineer of the Illinois Central at Chicago, Ill.

Miss., Scranton.—William D. Bullard of Scranton confirms the report that he has been granted franchise for an electric railway from Scranton to the Alabama boundary, also from Orange Grove to Moss Point, and from there to Pascagoula. As soon as franchise is granted for the entire route it is proposed to organize and build to Mobile, Ala., about 40 miles.

Miss., West Point.—The proposed West Point & Houston Railroad is reported promoted by A. F. Fox and Moseley & Lagrone of West Point and others. It is intended to raise a bonus of \$40,000 for construction.

Mo., Columbia.—M. M. Stephens of East St. Louis, Ill., is reported contemplating the construction of an electric railway four miles long from Columbia to coal fields in the northern part of Boone county.

Mo., St. Louis.—The St. Louis County Belt Railroad Co. is reported as announcing that it will probably build next year its proposed 30-mile line around St. Louis via Maplewood, University City, Ferguson, Afton, Carsonville, Old Orchard, Redlight, Clayton and Prospect Hill; capital \$300,000. The officers are Thomas M. Gallagher, president; Bert H. Lang, vice-president; James E. Hereford, treasurer; Edward W. Rannels, secretary, and James D. Houseman, general manager.

N. C., Rockingham.—The Rockingham Railroad Co. has been chartered to build a railroad from Roberdell No. 1 via Rockingham to Gibson, N. C., 24 miles; authorized capital \$150,000; subscribed capital \$25,800. The directors are J. P. Leak, W. C. Leak, M. L. Hinson, H. C. Dockery, W. L. Parsons and W. I. Everett.

Okl., Ardmore.—The Arbuckle & Western Railroad Co. has elected directors as follows: Oscar O. Ayres, R. A. Hefner, Dr. J. A. Bivens, Sherman Joins, J. R. Pennington, W. W. Frye and Emory S. Ayres. Preliminary work for construction is to be undertaken.

S. C., Greenville.—Survey is reported begun for the Greenville, Greenwood & Augusta Railway promoted by Henry Briggs, Frank Hammon and J. P. Charles of Greenville, J. C. Fawcett and H. J. Zimley of New York.

Tenn., Athens.—James B. Wright of Athens, president of the Athens & Tellico Railroad, is reported as saying \$75,000 will be spent for improvements to the line, including revision of grade and filling in trestles.

Tenn., Dyersburg.—R. M. Hall of Dyersburg, according to a dispatch, is working on a plan to build a railroad from Dyersburg to Jackson, Tenn., via Alamo, about 45 miles. W. H. Biggs, also of Dyersburg, is said to be interested.

Tenn., Harriman.—The full list of incorporators of the Harriman, Knoxville & Eastern Railroad is C. E. Hendrick, W. A. Rockwell, H. M. Winslow, L. E. Goodman and H. L. Cory. It proposes to build a line from Harriman to Knoxville, Tenn., 35 miles, and thence to the Atlantic seacoast; capital \$10,000.

Tenn., Hampton.—The Laurel Fork Railway Co., chartered to build from Hampton to Gouge, five miles, all in Carter county, is the logging road of the Pittsburg Lumber Co., which has 6000 acres there. The officers of the lumber company are: William Flinn, president; L. D. Gastiger, vice-president and manager, and A. Rex Flinn, secretary and treasurer, all at Pittsburg, Pa.

Tenn., Memphis.—The Southern Railway, it is reported, will make improvements between Memphis and Chattanooga, laying new rails and reconstructing bridges. W. H. Wells is chief engineer of construction at Washington, D. C.

Tex., Austin.—W. S. McGregor of Temple, Tex., has, it is reported, submitted a proposition with the Austin Business League to build a railroad from Austin to Fredericksburg and Johnson City.

Tex., Brownsville.—R. L. Stoll of Brownsville, Edwin S. Brodnix of St. Louis and others will, it is reported, build a railroad from San Antonio to the mouth of the Rio Grande in connection with their proposed development plans of the Port Brownville Sugar Lands Co. No details are stated.

Tex., Brownsville.—The City Council has granted a franchise to the St. Louis, Brownsville & Mexico Railway to connect with the Rio Grande Railroad and to build a long siding. E. C. Burgess is chief engineer at Kingsville, Tex.

Tex., Corpus Christi.—The St. Louis & San Francisco Railroad, it is reported, will immediately begin construction of a line from Brady, Tex., via Kingsville to Corpus Christi, about 260 miles. F. G. Jonah is chief engineer of construction, and M. C. Byers is chief engineer at St. Louis, Mo.

Tex., Crystal City.—An officer of the Crystal City & Gardendale Railroad Co., recently chartered, says that it will build a line 40½ miles long from Crystal City to Gardendale, Tex., through level country. The only bridge of importance will be over the Nueces River. The directors are: President, general manager and chief engineer, A. R. Ponder, Crystal City, Tex.; vice-president, Mason Williams; treasurer, W. F. McCaleb; secretary, H. L. Howard; Adolph Groos, S. P. Brundage and Eli Howell of San Antonio, Tex. President Ponder is quoted as saying that grading is all completed, and that rails have been ordered.

Tex., Fort Worth.—John B. Buchanan of North Fort Worth, who is interested in the projected interurban electric line from Fort Worth to Mineral Wells, is reported as saying that he has \$50,000 to begin construction, and he is also guaranteed right of way, depot grounds and subscriptions to \$150,000 in stock. Capitalists of Chicago, Fort Worth and New York are said to be interested.

Tex., Galveston.—E. N. Ketcham, contractor of Galveston, is reported to have a contract to build 10½ miles of connecting railroad on sugar plantations in the Brazos Valley bottoms. About 100,000 yards of material will be handled.

Tex., Houston.—A letter to the Manufacturers' Record says that survey has been completed for the Houston, Somerville & Western Railway, which it is proposed to build between Somerville and Taylor, Tex., 60 miles, and it is desired to hear from contractors as to grading. The entire line will be 125 miles long. H. H. Fielder is president; M. R. Hoxie, vice-president, and L. J. Gould, engineer of construction, 427 Boulevard, Houston, Tex.

Tex., Pecos.—The Santa Fe system, according to a report, is investigating a route for an extension from Brady, Tex., via Eldorado, Ozona, Sheffield and Fort Stockton to Pecos, Tex., about 300 miles. F. Merritt is chief engineer at Galveston, Tex.

Tex., San Antonio.—J. F. Edwards, it is reported, has been elected president of the San Antonio, Brownsville & Tampico Railroad Co., to succeed A. B. Heddon of New York, resigned. B. S. Harrison, president of the Harrison Construction Co., which has

the general contract for building the road, is reported on the ground directing construction, which has progressed considerably. Grading is also expected to begin soon at San Antonio.

Tex., San Angelo.—The Kansas City, Mexico & Orient Railway, according to a dispatch, requests bids to grade 25 miles of line east of Fort Stockton. W. W. Colpitts is chief engineer at Kansas City, Mo.

Va., Marion.—An officer of the Marion & Rye Valley Railway says that no arrangements have been made for an extension, although the matter was under consideration. J. C. Campbell is president and general manager, and L. A. Amsler is treasurer.

Va., Tazewell.—Engineers are reported surveying for a railroad through Buchanan county, along the Louisa fork of the Big Sandy River, to reach Pikeville, Ky.

W. Va., Charleston.—W. O. Lipscomb, Roanoke, Va., is reported to have been given contract for the proposed line of the Campbell Creek Railway & Coal Co. of Charleston. J. M. Lipscomb will be in charge of the work.

W. Va., Hendricks.—The Western Maryland Railway, it is reported, will substitute heavy steel bridges for three wooden structures between Hendricks and Thomas, W. Va., to accommodate heavier equipment. H. R. Pratt is chief engineer at Baltimore, Md.

W. Va., Thurmond.—The Chesapeake & Ohio Railway, according to a press report, will revise the Loup Creek Branch between MacDonald and Thurmond. H. Pierce is engineer of construction at Richmond, Va.

W. Va., Vivian.—The Sycamore Coal Co. will build three miles of railroad along Sycamore Creek, including three trestles; E. S. Lore is contractor. S. W. Patterson is president, A. Z. Litz vice-president, G. S. Patterson treasurer and secretary; S. H. Meem is chief engineer.

STREET RAILWAYS

La., Shreveport.—The Shreveport Traction Co. proposes to build something more than one mile of new track under the franchise granted by the City Council in the Fairfield-Ave. territory. W. F. Dillon is president.

Tenn., Memphis.—The Memphis Street Railway Co. has been granted a franchise to begin its proposed crosstown line on Bellevue Blvd.

Tex., Amarillo.—The proposed street railway, for which franchise was granted to N. A. Brown of Dallas, will be two miles long, and will connect San Jacinto Heights with Polk St.

Tex., El Paso.—The El Paso Electric Railway Co. has filed a certificate to increase its capital stock to the extent of \$1,000,000, or from \$1,500,000 to \$2,500,000, to provide for financing and future improvements.

Tex., Houston.—The Houston Electric Co. has been granted a franchise to extend the South End Line to the Rice Institute, including double-tracking. It will be about two miles long.

W. Va., Fairmont.—The Baltimore & Ohio Railroad, it is announced, is behind the proposed State Line & Southern Railroad Co., lately chartered for a 30-mile line from Rivesville to the Pennsylvania boundary along the Monongahela River. S. D. Brady of Parkersburg, W. Va.; B. M. Laughhead of Morgantown, W. Va., and others are the incorporators. The former is engineer. He is quoted as saying that the location survey is being completed and that the Pennsylvania Railroad and the Pittsburg & Lake Erie Railway are also interested through the Little Kanawha syndicate, which owns the charter. Rights of way are being obtained.

W. Va., Wheeling.—The City & Elm Grove Railroad Co. has changed hands, and it is reported that extensive improvements will be made. Joseph Spedel, Sr., is president.

New Metal-Polishing Specialties.

There is being placed on the market by the Silverine Manufacturing Co., 212-214 Wooster St., New York, two new metal-polishing specialties, one being "Silverine," which polishes and coats the metal with pure silver, acting like an electroplater, and the other "Brasine," which removes rust and polishes brass, nickel, copper, bronze, etc. These specialties, it is claimed, are non-inflammable and non-corrosive and contain no acids, ammonia, mercury or benzine. Both of them have been tested by the Government, various railroad companies and other large enterprises, and favorable reports have been obtained. The company is anxious to secure reliable Southern agents.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressors.—J. B. Winslett, City Secretary, Dallas, Tex., will receive bids until July 1 on furnishing city with two duplex, cross-compound, two-stage air compressors, to be non-condensing; one compressor to be capable of furnishing not less than 1300 cubic feet of free air per minute against gauge pressure of 120 pounds, steam pressure 120 to 175 pounds; one compressor capable of furnishing not less than 1000 cubic feet per minute of free air against gauge pressure of 100 pounds, and be strong enough to work against 150 pounds without straining; specifications on file in said office, copy of which can be had on application; compressors to be delivered f. o. b. Dallas; each bid to be accompanied by certified check in sum of 5 per cent. of bid. (Date postponed from May 30, as lately stated.)

Asphalt Flooring.—A. C. Wilmeth, Snyder, Tex., wants prices on asphalt for flooring; cement base with asphalt top.

Barrel Machinery.—Shannondale Timber Co., Logan B. Shutt, secretary, Charles Town, W. Va., wants catalogues and prices on machinery to manufacture barrels, staves, heading, etc.

Barrels.—Austin P. H. Mullarky, Meriwether, S. C., wants samples and prices on cheap-grade barrels for shipping soft peaches to distillery; f. o. b. carlots.

Bath Fixtures, etc.—Rev. R. E. Flickinger, Valiant, Okla., wants bathroom outfit and water system for kitchen and bathrooms.

Boiler.—High Point Casket Co., High Point, N. C., wants second-hand return tubular boiler, 20 to 30 horse-power; quote delivered.

Boilers.—Hollingsworth Wheel Co., Hagerstown, Md., wants two new or second-hand return tubular boilers of 60 and 100 horse-power.

Boilers.—See "Engines, Boilers, etc."

Brick.—Capt. M. Walker, 1006 West Monroe St., Jacksonville, Fla., or Maj. Edwy White, 531 Candler Bldg., Atlanta, Ga., want prices on brick.

Brick Machinery.—Ladd-Birch Brick Co., Fort Payne, Ala., wants second-hand wet pan not less than seven feet in diameter.

Bridge Construction.—Palm Beach County Commissioners, R. H. Rousseau, chairman pro tem, West Palm Beach, Fla., will open bids July 5 for construction of bridge across drainage canal at Boynton, Fla.; plans and specifications on file in office of clerk of Circuit Court, Fred E. Feno; certified check, \$200.

Bridge Construction.—St. George Richardson, County Engineer, Memphis, Tenn., will receive bids until June 28 for construction of concrete culvert, 8x24, across 17-mile branch on Poplar St., about one mile west of Forrest Hill; plans and specifications on file in office of County Engineer or offices of following committee: E. E. Strong, T. T. McDonald, J. P. Humphries and others; certified check, \$75.

Bridge Construction.—Commissioners District of Columbia (Cuno H. Rudolph, John A. Johnston and William V. Judson), Washington, D. C., will open bids June 27 for constructing concrete and rubble arch bridge on line of Beach Driveway, Rock Creek, above Military Rd.; blank proposal forms, specifications and information can be obtained on application to Chief Clerk, Engineering Department, 427 District Bldg.

Bridge Construction.—W. C. Campbell, Superintendent of Public Works, Columbus, Ga., will receive bids until July 18 for construction of concrete-steel arch bridge (Melan System) over Chattahoochee River at Dillingham St.; plans and specifications may be seen and forms of proposal and contract may be obtained at office of superintendent and of Concrete-Steel Engineering

Co., Park Row Bldg., New York; copies of specifications and plans may be obtained by making deposit of \$30; each bid to be accompanied by certified check for \$10,000; bidders are to acquaint themselves with plans, drawings and specifications for work and by personal observation satisfy themselves of nature, character and location of proposed work.

Bridge Construction.—See "Railroad Construction."

Bridge Fender.—Alexandria & Pineville Bridge Co., Alexandria, La., will open bids July 28 for constructing creosoted timber frame protection work, or bridge fender, on pile foundations; for further information address Ira W. Sylvester, consulting engineer, Alexandria.

Building Materials, etc.—Van Horn & Son, Tulsa, Okla., wants prices on lumber, mill work, etc.

Building Materials.—Jones Bros., Macon, Ga., want prices on marble, granite, structural steel, cast-iron columns, plate glass and tile floors.

Bulkhead Wharf, etc.—Sealed bids will be received at office of Chas. E. Bolling, City Engineer, Richmond, Va., until July 5 for construction of a pile bulkhead wharf along east shore of James River from Gillies Creek to Nicholson St., and for excavation in deepening river alongside wharf; certified check for \$500, payable to City Treasurer; plans and specifications on file at office of City Engineer; usual rights reserved.

Candy Machinery.—Merchants' Candy & Cracker Manufacturing Co., A. J. Pursley, Jr., president, Pensacola, Fla., wants prices on candy machinery.

Canning Machinery.—Farmers' Warehouse Co., T. E. Chambers, general manager, Blackstone, Va., wants complete canning outfit (immediate shipment).

Cars.—Empire Chemical Mining Co., 601 Grant Bldg., Atlanta, Ga., wants two or three second-hand side-rocker all-steel dump cars of two yards capacity.

Castings.—Auguste J. Tete, Suite 216 Godchaux Bldg., New Orleans, La., wants addresses of foundries equipped to turn out heavy castings.

Cement Manufacturers.—Eastern Supply Co., 2519 East Monument St., Baltimore, Md., wants addresses of Maryland and Pennsylvania manufacturers of Portland cement.

Chewing Gum.—Earle Jenks, 1013 Selma St., Mobile, Ala., wants to correspond with manufacturers of chewing gum.

Clocks.—Allen E. Beddingfield, secretary Chamber of Commerce, Montezuma, Ga., wants to correspond with manufacturers of city clocks.

Coal-briquette Machinery, etc.—Bituminous Rock Products Co., J. S. Cottrell, secretary, Owensboro, Ky., wants to correspond with manufacturers of briquette coal and eggette coal from screening; wants prices on machinery and information on manufacture, marketing, etc.

Corn Cutters, etc.—Z. J. Carter & Son, Wallace, N. C., wants to correspond with manufacturers of corn and cotton stalk cutters.

Cotton-mill Machinery.—J. G. Garrett, care of Draper-Gar at Grocery Co., Bainbridge, Ga., wants to correspond with manufacturers of cotton-mill machinery.

Cracker Machinery.—Merchants' Candy & Cracker Manufacturing Co., A. J. Pursley, president, Pensacola, Fla., wants prices on cracker machinery.

Dam Construction.—See "Railroad Construction."

Disinfecting Plant.—Board of Awards, Baltimore, Md., will receive bids marked "Proposal for Disinfecting Plant" at office of J. Sewell Thomas, City Register, City Hall, until June 29 for furnishing and erecting disinfecting plant for use of Health Commission; certified check for \$250, payable to Mayor and City Council; plans and specifications on file at office of Edward D. Preston, Inspector of Buildings, City Hall; J. Barry Mahool, Mayor.

Elastic, etc.—W. H. Heffner, Hendersonville, N. C., wants prices on silk elastic; also wants to know where can get metal stamped similar to that on Brighton hose supporter.

Electric-light Franchise.—Commissioners will consider offers until August 1 on franchise for electric-lighting of Williamston, N. C.; right reserved to accept bid in the meantime; personal interviews invited; C. H. Godwin, secretary.

Electrical Equipment.—Capt. M. Walker, 1006 West Monroe St., Jacksonville, Fla., or Maj. Edwy White, 531 Candler Bldg., Atlanta, Ga., want prices on electrical equip-

ment for Salvation Army building at Jacksonville.

Electrical Machinery.—See "Police-Patrol System."

Electrical Machinery.—Greenfield Light & Power Co., Greenfield, Mo., will want 75 to 125-kilowatt generator, A. C.

Electrical Equipment.—Sanderson & Porter, engineers and contractors, 52 William St., New York, will need central-station equipment in connection with extensions and improvements to plants of Tucson (Ariz.) Gas, Electric Light & Power Co.; Tucson (Ariz.) Rapid Transit Co.; Albuquerque (N. M.) Gas, Electric Light & Power Co.; Sheridan (Wyo.) Electric Light & Power Co., and Grays Harbor Railway & Light Co., Aberdeen, Wash.

Elevators.—Commercial Motor Car Co., San Antonio, Tex., wants prices on elevators.

Engines, Boilers, etc.—Campobello Oil Mill, Campobello, S. C., wants two 75-horse-power Corliss or automatic engines; two 5x16 and two 6x16 boilers; heaters and pumps for same; new or second-hand.

Engines.—Hollingsworth Wheel Co., Hagerstown, Md., wants two new or second-hand Corliss-type steam engines of 35 and 70-horse-power, respectively.

Excavation.—Tuscarora Realty Co., Martinsburg, W. Va., wants bids on 10,000 cubic yards dirt excavation and 2000 cubic yards of rock.

Felt.—See "Upholsterers' Supplies."

Fire Doors.—United Warehouse Co., 815 Fulton St., New Orleans, La., wants cuts and prices on fire doors.

Fireproofing.—Commercial Motor Car Co., San Antonio, Tex., wants prices on fireproofing.

Gasoline Engine.—Rebuilt Machinery & Wrecking Co., Louisville, Ky., wants 7 to 10-horse-power second-hand marine gasoline engine; state age and location.

Gas-plant Construction.—Bluefield Gas & Fuel Co., Bluefield, W. Va., will want estimates on construction of gas plant. Address Wm. E. Ross, care of Ross & Kahle.

Gasoline Cars.—G. Bert Raymond, Danbury, Conn., wants to correspond with manufacturers of or dealers in small gasoline cars; for light passenger service on standard-gauge railroad.

Gasoline Engine.—Dr. Cyrus F. Crosby, Heber, Ark., wants prices on gasoline engine.

Heating Plant.—Capt. M. Walker, 1006 West Monroe St., Jacksonville, Fla., or Maj. Edwy White, 531 Candler Bldg., Atlanta, Ga., want prices on steam-heating plant for Salvation Army building at Jacksonville.

Heating Plant.—Rev. R. E. Flickinger, Valliant, Okla., wants hot-air heating plant.

Heating Plant.—Emil Klemm & Co., 225 Law Bldg., Baltimore, Md., want prices on hot-water heating plant.

Heating Plant, etc.—Nat. M. Pickett, Madison, N. C., wants prices on steam-heat and water-furnishing supplies for residence.

Hoisting Engines.—Pennsylvania Equipment Co., West End Trust Bldg., Broad St. and South Penn Sq., Philadelphia, Pa., wants second-hand 18x30-inch mine hoisting engines.

Hoisting Engines.—Van Horn & Son, Tulsa, Okla., wants new or second-hand steam hoisting engine.

Hoisting Engine.—Jones Bros., Macon, Ga., want prices on hoisting engine (steam preferred).

Ice Machinery.—L. C. Morrow, Pierce, Fla., is interested in ice-making machinery.

Laundry Machinery.—Alabama Brokerage Co., Demopolis, Ala., wants addresses of manufacturers of laundry machinery.

Lighting Equipment.—Rev. R. E. Flickinger, Valliant, Okla., wants apparatus for lighting.

Leather.—See "Upholsterers' Supplies."

Leather.—P. P. Nicolas T. Kanaeros, 15 Rue Aristotelous, Athens, Greece, is interested in American glazed kid; wants prices, samples, etc.

Locomotive.—Whiting Manufacturing Co., Asheville, N. C., wants 60-ton straight-connected broad-gauge locomotive for Judson, N. C., operation; new or second-hand; C. W. Kent, purchasing agent.

Locomotive.—J. D. Karasik, Frick Bldg., Pittsburg, Pa., wants 35 or 40-ton three-driver locomotive, 150 pounds steam pressure, for Georgia delivery.

Mining Machinery.—See "Hoisting Engines."

Metallurgy.—E. A. Williams, Mondamin, Okla., wants information relative to McKnight process of recovering metal from sulphide and other refractory ores.

Paint.—Rock Hill Buggy Co., Rock Hill, S. C., wants barrel of pure asphaltum or other suitable paint for coating tank interior.

Paving.—Bob Parman, City Clerk, Oklahoma City, Okla., will open bids July 5 to pave with petrolium pavement, grade, etc., 31st, 32d, 33d, Hill, Eubank, 35th and other streets; all work, including paving, grading, concrete curb and gutter, oak curbing, etc., to be in accordance with plans and specifications on file in office of City Clerk; certified check, 3 per cent. of bid.

Paving.—Baltimore (Md.) Board of Awards will open bids June 29 to grade, curb and pave with sheet asphalt, asphalt blocks, vitrified blocks, vitrified blocks or bitulithic Laurens St. from Park Ave. to Bolton St.; specifications and proposal sheets furnished on application to office of B. T. Fendall, City Engineer.

Paving.—J. C. Kirby, Mayor, Rotan, Tex., will open bids July 1 for grading and graveling 26,756 square yards of streets; plans and specifications on file at Mayor's office.

Paving.—Tuscarora Realty Co., Martinsburg, W. Va., wants bids on 11,000 square yards stone macadam paving and 4200 feet concrete curbing and gutter; also 15,000 square feet of cement sidewalks.

Paving.—Baltimore County Highways Commission, E. Stanley Bosley, secretary, Towson, Md., will open bids July 14 for building section of State-aid highway along Valley Rd., Section 6, between Jenkins' entrance and Rogers Ave., distance of .51 of mile; bids to be made on forms to be obtained at office of commission; certified check, \$200; plans can be seen and forms of specifications and contract obtained at office of Maryland Geological and Economic Survey, Baltimore, Md.

Paving.—College committee of State Board of Agriculture, J. P. Connors, president, Stillwater, Okla., will open bids June 27 for construction of 3500 linear feet of sidewalks five feet wide; sidewalk to be of Portland-cement concrete and cost \$2000; plans and specifications may be obtained on application to Prof. R. E. Chandler, Stillwater.

Paving.—Street Improvement Committee, D. M. Jones, chairman, Elizabeth City, N. C., will receive sealed bids until July 5 for street paving; certified check for \$1000; usual rights reserved.

Paving.—Guy T. Horner, chairman Street Committee, Boykins, Va., will open bids June 25 for laying 2000 yards of granolithic sidewalks. For further information address Mr. Horner.

Paving.—John M. Murch, County Auditor, Galveston, Tex., will open bids July 5 for constructing sidewalk and curbing on Galveston county seawall boulevard from Strand (Ave. B) to Ave. H; will require 4000 square yards sidewalk, 2200 linear feet concrete curbing and 2350 linear feet concrete retaining curb; granite, limestone, sandstone or gravel may be used for all concrete; plans and specifications on file in office of County Auditor, from whom copies may be had on application; certified check, \$150.

Piping.—Farmers' Gin & Cotton Co., Bob Smith, president, Fate, Tex., wants 1-inch, 1½-inch and 2-inch pipe.

Piping.—Victoria Compress Co., A. N. Ivanchich, president, Victoria, Tex., wants 2000 feet four-inch pipe.

Piping.—Proposals will be received by Board of City Commissioners at office of City Secretary, Galveston, Tex., until June 30 for furnishing f. o. b. Galveston the following material: 54 tons 8-inch cast-iron water pipe; five 8x8x6 tees; one 8x8 cross; one 8x8x6 cross; six 6-inch 90-degree bends; four 8x6 reducers; four 8-inch plugs; two 6-inch plugs; all of above to be guaranteed for 120 pounds pressure and 300 feet head; bids to be accompanied by certified check for \$250; H. C. Lange, Water-works and Sewerage Commissioner; A. S. Drewry, Superintendent Water-works and Sewerage; John D. Kelley, City Secretary.

Planing-mill Machinery.—Sowell, Cyrus & Co., Hillsboro, Tex., want to correspond with manufacturers of or dealers in planing-mill machinery.

Plumbing.—Capt. M. Walker, 1006 West Monroe St., Jacksonville, Fla., or Maj. Edwy White, 531 Candler Bldg., Atlanta, Ga., want prices on plumbing for Salvation Army building at Jacksonville.

Police-patrol System.—Theo. A. K. Hummelshane, Fire and Police Commissioner, Cumberland, Md., wants information on installation of police-patrol system, comprising alarm boxes at stations; operated by electrical switchboard at police headquarters; wants to know cost, operation, advantages, etc.

Pump.—Lake Charles Railway, Light &

Water-works Co., T. J. Bird, superintendent, Lake Charles, La., will want about 3,000,000-gallons-per-day pumping capacity; electric or steam power.

Pumps.—Dr. Cyrus F. Crosby, Heber, Ark., wants prices on pumps.

Pumps.—See "Engines, Boilers, etc."

Pumps.—See "Well-drilling Machinery, etc."

Upholsterers' Supplies.—Tulsa Furniture Factory, Tulsa, Okla., wants upholsterers' supplies, including springs, cotton felt, leather and Boston leather.

Railroad Construction.—Southern States Lumber Co., Dunbarton, S. C., invites bids for construction of 15 miles of logging railroad, including grading and bridge building;

Flooring.—Emil Klemm & Co., 225 Law Bldg., Baltimore, Md., want prices on hardwood for excavating log pond and building dam for same.

Ranges.—See "Stoves."

Reinforcing Bars.—Commercial Motor Car Co., San Antonio, Tex., wants prices on reinforcing bars.

Road Construction.—Magnolia Park Land Co., 912 Texas Ave., Houston, Tex., will open bids June 28 for grading, shelling and draining Brays Blvd. in Magnolia Park; work will require removal of 17,635 cubic yards excavation, 1482 cubic yards shell, 96 linear feet sewer tile, 25 cubic yards broken stone, 5 cubic yards sand and 4 barrels cement; plans and specifications on file in company's office.

Road Construction.—Cass County Industrial League, Martin Allday, secretary, Atlanta, Tex., wants to correspond with engineers, contractors, etc., relative to road building; \$40,000 bond issue voted.

Road Construction.—Road Commissioners, Third Supervisors District, Lee county, Tupelo, Miss., will let contract July 6 to lowest bidder for construction of about 25 miles road as follows: (1) Tupelo and Fulton road, from east end of Tupelo levee east to county line; Mooresville and Marietta road, from Mooresville north 3200 feet to bridge over Boguefala Creek; Tupelo and Sallito road, from Tupelo to Town Creek bridge; Tupelo and Belden road, Tupelo to Belden; Belden and Ellistown road, from Belden north; Tupelo and Ellistown, from beginning of Tupelo and Belden road north; Tupelo and Chester-ville road, from Tupelo west; plans and specifications on file with clerk of Board of Supervisors of Lee county; all bids to be sealed and filed with commissioners on or before July 5; rights reserved; D. W. Robins, Emmett Whitesides and H. B. Heard, commissioners.

Road Construction.—Palm Beach County Commissioners, R. H. Rousseau, chairman pro tem, West Palm Beach, Fla., will open bids July 5 for grading and hard-surfacing with Dade county rock, road from Mangonia to Stuart; bid to include construction of all necessary bridges by bidder except bridge across Loxahatchee River at Jupiter; plans and specifications on file in office of Fred E. Fenne, clerk; separate bids will be received for work using oyster shell for hard-surfacing instead of Dade county rock; for grading and preparing roadbed, exclusive of building necessary bridges or hard-surfacing; for hard-surfacing road with shell or Dade county rock, exclusive of grading, bidder to specify which material is to be used; for construction of bridges and culverts, exclusive of Loxahatchee River bridge.

Road Machinery.—T. H. Stokes, Oultewah, Tenn., wants to correspond with manufacturers of small graders for dirt roads.

Roofing.—Emil Klemm & Co., 225 Law Bldg., Baltimore, Md., wants prices on slate and asbestos roofing.

Roofing.—Nat. M. Pickett, Madison, N. C., wants prices on roof tiling.

Saw.—Rebuilt Machinery & Wrecking Co., Louisville, Ky., wants second-hand 36-inch band saw.

Saws.—Frenchtown Flint Glass Co., W. G. Neutzling, president, Frenchtown, W. Va., wants prices on sawing cut-off saw and table rip saw.

Sawmill, etc.—Shippin Bros. Lumber Co., Ellijay, Ga., is opening bids on machinery for band saw and planing mills.

Sewer Construction.—City Secretary, Amarillo, Tex., will open bids June 28 for construction of sanitary sewers comprising 11,120 feet 15-inch, 8155 feet 12-inch and 30,835 feet 6-inch diameter sewer pipe; each bid to be accompanied by certified check for \$500, payable to J. H. Patton, Mayor; plans and specifications on file in office of City Secretary and E. L. Dalton, engineer, Dallas, Tex.

Sewer Construction.—Bob Parman, City Clerk, Oklahoma City, Okla., will open bids July 5 for construction of lateral sewer on Winan's Highland Terraced Addition, Wi-

nan's Second Addition, University Addition, and portions of Central Park, Ross-Main, Grand View and Central Northwest Additions; plans and specifications on file in office of City Clerk; certified check, 3 per cent. of bid.

Sewerage Equipment.—Board of Sewer Commissioners, Charleston, S. C., will open bids July 11 for construction of sewage-receiving tank, pump pit and appurtenances, including vertical centrifugal pumps and electric motors with controlling devices; J. H. Bingle, City Engineer.

State Mantels.—S. G. Meredith, P. O. Box 341, Richmond, Va., may want 15 slate mantels.

Soap Machinery.—Dr. Swartz Chemical Co., Box 590, Dallas, Tex., wants addresses of manufacturers of soap machinery.

Springs.—See "Upholsterers' Supplies."

Stamped-metal Specialties.—See "Elastic, etc."

Standpipe.—Waynesboro, Va., will receive bids until July 8 for constructing steel standpipe 25 feet diameter and 80 feet high; certified check \$300; Paul B. Woodfin, Town Treasurer.

Stave and Heading Machinery.—Shannondale Timber Co., Charles Town, W. Va., wants complete equipment stave and heading machinery.

Steel Stockade.—E. F. Looper, County Supervisor, Pickens, S. C., wants portable steel stockade for convicts.

Stone Columns.—D. E. Tribble & Co., Clinton, S. C., want to buy stone columns (Indiana sandstone columns preferred).

Storm Sewers.—Tuscarora Realty Co., Martinsburg, W. Va., wants bids on several hundred feet 12-inch storm sewers.

Steam Trap.—Virginia Box & Column Co., Altavista, Va., wants new or second-hand steam trap for drykline.

Steel Bars, etc.—Bids will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until July 18 for furnishing deformed steel bars, manganese-steel rings for rock-crusher screen, pneumatic hoist, gasoline motor and spud timbers. Blank and general information relating to circular No. 591 may be obtained at above office or office of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans; 1086 North Point St., San Francisco, Cal.; also from U. S. Engineer office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

Stoves.—S. G. Meredith, P. O. Box 341, Richmond, Va., wants prices on 15 ranges, with water fronts, and four latrines.

Structural Steel.—See "Building Materials."

Tank.—Sanford-Day Iron Works, Knoxville, Tenn., wants 12,000-gallon crude oil tank; under ground.

Tile.—Commercial Motor Car Co., San Antonio, Tex., wants prices on hollow tile.

Tiling.—Emil Klemm & Co., 225 Law Bldg., Baltimore, Md., want prices on tiling.

Tiling.—See "Roofing."

Vault Doors.—Pennsylvania Equipment Co., West End Trust Bldg., Broad St., and South Penn Square, Philadelphia, Pa., wants one 28-inch wide and one 32-inch wide second-hand vault doors.

Water Meters.—Office of Commissioners, Washington, D. C. Proposals will be received until June 27 for furnishing water meters. Blank forms of proposal, specifications and necessary information may be obtained from chief clerk, Engineer Department, Room 427 District Bldg.; Cuno H. Rudolph, John A. Johnston, William V. Judson, Commissioners, D. C.

Water-works.—Board of Public Affairs, Fort Smith, Ark., will receive bids until July 6 for extension of water mains; plans and specifications on file in office of City Clerk; separate bids will be received for pipes, specials, hydrants, etc.; certified check for 10 per cent. of bid.

Water-works, etc.—J. W. Rackley, City Clerk, Cherokee, Okla., receives bids until June 30 for furnishing material and constructing extension to water-works and electric-light system; separate bids as follows: Furnishing material and labor (except materials separately itemized) and constructing complete systems of water-works and electric lighting; certified check, \$1000; two compound duplex steam pumps, 500 gallons

capacity; certified check, \$100; furnishing material and erecting steel tower and tank of 70,000 gallons capacity, 120 feet high; certified check, \$100; furnishing Corliss engine for direct connection to 150-kilowatt alternating-current generator mentioned in next division of this notice; certified check, \$100; furnishing 150-kilowatt three-phase 60-cycle 2300-volt alternating-current generator, switchboard, transformers and street-lighting equipment; certified check, \$200; furnishing material and constructing sanitary-sewer outlet, 15-inch vitrified pipe, 18,940 feet long, 4 to 12 feet deep; certified check \$1000. All equipment to be furnished f. o. b. cars Cherokee; plans and specifications on file at office of City Clerk and of Burns & McDonnell, engineers, Scarritt Bldg., Kansas City, Mo.; bidders can obtain extra copies of plans from engineers for \$5; A. T. Titus, Mayor.

Water-works.—City of Hancock, Md., opens bids July 6 for construction of water-works; to include 300,000-gallon concrete reservoir, pumping station, filtration plant, two miles of water pipe and sewer; plans and specifications may be had of Penniman & Fairley, architects, 411 Marine Bank Bldg., Baltimore, Md., or at office of R. J. McCandlish, clerk, Hancock, on deposit of \$10.

Water-works.—F. C. Wyse, superintendent of water-works, Columbia, S. C., will open bids July 2 for construction of 1200 feet of six-inch and 2100 feet of 12-inch water mains, together with appurtenances; plans and specifications on file in office of Mr. Wyse.

Water-works.—Trustees Confederate Home, Pewee Valley, Ky., will receive sealed bids until June 25 at Room 405 Louisville Trust Bldg., Louisville, Ky., for repairs to water-works; certified check for \$300; usual rights reserved; plans and specifications on file at place of letting; H. B. Young, president board of trustees.

Water Systems.—Dr. Cyrus F. Crosby, Heber, Ark., wants prices on water systems.

Well-drilling Machinery, etc.—P. G. Millen & Co., Dade City, Fla., wants catalogues and prices on well machines, well-machine tools, pumps and cylinders.

Wheel Machinery.—Hollingsworth Wheel Co., Hagerstown, Md., wants machinery to manufacture wheels, hubs, spokes and rims; from sawmill to wheel finisher; second-hand or rebuilt machinery considered.

Woodworking Machinery.—See "Wheel Machinery."

Woodworking Machinery.—See "Barrel Machinery."

Woodworking Machinery.—High Point Casket Co., High Point, N. C., wants 30-inch double surfacer; also rip, cut-off and band saws.

Woodworking Machinery.—Thomasville Chair Co., Thomasville, N. C., wants self-feed rip saw, hydraulic glue press and engine lathe with screw-cutting attachment. (Second-hand preferred.)

INDUSTRIAL NEWS OF INTEREST

Installing Heating Equipment.

It is announced that Knodler & Meredith, plumbing and heating contractors, Chattanooga, Tenn., are installing heating equipment in the new apartment-house to be known as Highland Court, at East End and McCauley Aves., Chattanooga.

Appoints Chicago Sales Manager.

The Wisconsin Engine Co., Corliss, Wis., announces that it has appointed George B. Foster as its sales manager in Chicago, with offices in the Fisher Bldg. Mr. Foster will represent the company in the sale of its products in the Chicago district.

Contract for Ventilating Equipment.

The Carolina Electrical Co., 110 Fayetteville St., Raleigh, N. C., has secured contract to supply an electric-driven multivane fan for the ventilating system at the State Capitol building at Raleigh. This company recently secured a contract for the lighting equipment for the same building.

Construction Engineer Wants Partner.

A construction superintendent and engineer wants to associate with reliable and influential party to engage in general concrete construction. His experience covers a wide range of construction in nearly all the principal cities of the eastern part of the United States, and he is well known in the South. Inquirers are invited to address "Contract," care of Manufacturers' Record.

Sale of Manufacturing Realty.

Attention is directed to an announcement of the voluntary liquidation sale of the manufacturing realty, together with machinery and some personality, of the Glenark Knitting Co., at Woonsocket, R. I. The sale will be held on the premises on June 28, and illustrated catalogue regarding the property, together with other information, may be had upon application at the office of J. E. Conant & Co., auctioneers, Lowell, Mass.

At Master Car Builders' Convention.

The Electric Storage Battery Co., general offices, Allegheny Ave. and 19th St., Philadelphia, announces that it will exhibit at the Master Car Builders' convention at Atlantic City, occupying space No. 409. It will have on exhibition storage batteries for car lighting, switch and signal operation, and for electric-vehicle propulsion and gas-engine ignition. The company will be represented by John R. Williams, second vice-president; Charles Bilzard, third vice-president; E. R. Reynolds, F. L. Kellogg and H. E. Hunt.

Purchased New Plant.

In connection with the purchase of a new plant by the Erie Pump and Engine Works, main office, Odd Fellows' Temple, Erie, Pa., it is interesting to note that the company will have ample room for the expansion of its trade. Its plant is central to railroads, freighthouses, etc., and affords excellent facilities for manufacture and shipment. The company states that at present its trade is all that can be expected, and indications point to a banner year. It manufactures

turbine pumps, centrifugal pumps, and pumps, steam engines, etc., and anticipates doubling the capacity of its plant next year.

Completes New Tinhouse.

The Union Sheet & Tin Co., Farmers' Bank Bldg., Pittsburg, Pa., has completed a new tinhouse at its Marietta (O.) plant and has equipped it with modern tinning pots and machinery for producing the highest grade of tin plate andterne plate. This company's Marietta rolling mills are in successful operation, and the company offers a limited tonnage of tin plate,terne plate and black plate products for delivery during June, July and August, and a large tonnage for delivery during the remainder of the year.

Takes Over Interests.

It is announced that the Marsh Company, 970 Old Colony Bldg., Chicago, has taken over the entire manufacturing and selling interests of the Miracle Pressed Stone Co. of Minneapolis, and will handle the trade of the latter company from this office. Expressing his regret that it is necessary to withdraw from the activities involved in the conduct of the Miracle company, O. U. Miracle extends thanks to his customers and friends and states that from this time on he will be identified with extensive contracting operations in the Middle West.

Reports Satisfactory Trade.

As an indication that the class of service it renders its customers is eminently satisfactory, the National Seal Co., 8 North 12th St., Richmond, Va., reports that its trade has never been so satisfactory as at present and that it has orders for all the work it can attend to. This company manufactures rubber stamps, seals, stencils, metal checks, stock certificates, bonds, etc., and its customers are located in every part of the United States. It has given special attention to stock certificates for new corporations.

Buys Steel Plant in Delaware.

As an indication of their intention to greatly enlarge their activities, Edgar Allen & Co., Ltd., 434 West Randolph St., Chicago, have purchased the steel-casting foundry of the Tropenas Steel Co. at Newcastle, Del. They will enlarge the plant, increasing the force of workmen from 300 to 1200, for the manufacture of their products. These include Allen's tool steels, rolled manganese steel rails, built-up railway crossings, switches, Turner's iron-fibred steel, Turner's burglar-proof safe plate, etc. J. C. Ward is a director of the company and general manager of its Chicago plant.

Steam and Electrical Machinery Orders.

That the John A. Stewart Electric Co., distributors of electrical and steam machinery, 703 First National Bank Bldg., Cincinnati, continues to have a satisfactory demand for its products is indicated by its recent sales. Among these are two 500-kilowatt direct-connected generator engine units to the People's Portland Cement Co. of Chicago for supply-

ing power at its new mill at Sandusky, O., and two 300-horse-power high-pressure Stirling boilers to the York Haven Paper Co. of York, Pa., for auxiliary power.

Closes Important Contracts.

Evidencing a satisfactory volume of trade are several important contracts recently closed by the Chapman Valve Manufacturing Co., 818 Victoria Bldg., St. Louis. These include an order for sluice gates for the Randall Farm reservoir at Denison, Tex.; four 48-inch gate valves and four electrically-operated floor stands for the Louisville (Ky.) Water Co.; cast-steel gate valves for the Union Electric Light & Power Co., St. Louis, and a carload of gate valves for the Water Department of Dallas, Tex.

Establishes Birmingham Office.

For the more convenient canvas of Southern territory contiguous to Birmingham the Barber Asphalt Paving Co., Land Title Bldg., Philadelphia, has established a Birmingham office with Charles S. Wadsworth in charge. This company is one of the largest producers of asphalt and ready roofing in the world, and its facilities have been employed on some of the most important contracts undertaken in this and other countries. Mr. Wadsworth's offices, it is announced, will be in the Chamber of Commerce Bldg.

Receiver's Sale of Plant and Properties.

The attention of prospective purchasers is directed to an announcement of a receiver's sale of the plant and real estate of the International Car Co., located on Metairie Rd., Bath, La. This sale will embrace a tract of land 350x539 feet and all mechanical equipment of the plant, the sale to be held on July 12. The Teutonia Bank & Trust Co. of New Orleans is the receiver named in the proceedings; Danziger & Tessler, C. A. Tessler, auctioneer, 134 Carondelet St., New Orleans, and Dort, Kernan & Dort, attorneys.

One-Lock Reamer Co.

The William J. Smith Company, manufacturer of a one-lock adjustable reamer, announces that its corporate name has been changed to the One-Lock Reamer Co., with the same management, including Joseph Swift, president; Samuel Smith, secretary and treasurer, and W. B. Gardiner, superintendent. To meet the steady demand for its improved type of one-lock reamer the company states that it has added extensively to its manufacturing facilities, and that after July 1 it will be established in larger quarters. The offices of the company are located at New Haven, Conn.

Lowry Round Bale Patents for Sale.

Attention is directed to an announcement inviting bids until July 15 for the purchase of United States letters patent for the Lowry round bale, method of making the bale and the press and mechanical appliances, the patents covering the Lowry patents in every aspect. These patents number 62, including the basic press, bale and method patents, as well as subsidiary patents. Cash or certified check for \$500 must accompany each bid, to be returned unless the bid be accepted, and to be forfeited if the accepted bidder fails to complete the purchase. Balance of successful bid will be payable in cash on or before July 29 at the office of Goodwin, Dresel & Parker, 84 State St., Boston, Mass., when transfer will be perfected. For further information address Philip M. Reynolds, treasurer Planters' Compress Co., 201 Devonshire St., Boston, Mass.

Crocker-Wheeler Sales.

Recent sales of the Crocker-Wheeler Company, Ampere, N. J., engineer and manufacturer of electrical equipment, etc., include the following: 300-kilowatt engine-type generator for supplying light and power, to Barber-Coleman Company, Illinois; 150-kilowatt engine-type direct-connected generator, to L. A. Becker, Illinois; 350-kilowatt engine-type direct-connected generator, to Eberhardt Faber Pencil Co., New York; 150-horse-power direct-connected motor, to Columbia Chemical Co., Ohio; more than 365 horse-power in direct-connected motors, to A. M. Beyer, Pennsylvania, to operate rolls, presses, shears, etc., in pipe mill; two 100-kilowatt engine-type direct-connected generators and 190 horse-power in direct-connected motors, to Panola Cotton Oil Co.; 600-kilowatt direct-connected engine generator, to Keystone Watch Case Co.; 250-kilowatt direct-connected engine-type generator, to Standard Gauge Steel Co., Pennsylvania; 250 K. V. A. engine-type alternating-current generator, with one 14-kilowatt 125-volt exciter, to American Fork & Hoe Co., Ohio; 250 K. V. A. belt-type alternating-current generator, to Western Canada Flour Mills Co. of Ontario;

200 K. V. A. coupled-type alternating-current generator, with 9-kilowatt exciter and two 200 K. V. A. 15,000-2300-volt transformers, to city of Sylacauga, Ala.; 250 K. V. A. type alternating-current generator, to Michigan Buggy Co., Kalamazoo, for supplying power to induction motor.

Compelled to Seek Larger Quarters.

To properly develop its trade the Southern Can Co., now located at No. 2303 Boston St., Baltimore, Md., will remove its entire plant to Wolfe and Lancaster Sts. in the fall, where it will erect a large three-story structure, which, in connection with other warehouses already on the property, will give it one of the largest plants of any independent company in the country. The new location will be the means of greatly increasing the capacity of its lithographing department. This company has had an extensive growth and it is well known over the country. It manufactures not only packers' cans, but a general line of cans. Its products and service are particularly well known throughout the South, especially among the large syrup refiners, coffee roasters and baking-powder manufacturers. In its new quarters it will have excellent rail and water facilities for shipping, and will employ over 400 hands. E. Everett Gibbs is president and Leonard Burbank, Jr., is vice-president and general manager of the company.

Pleased With Emerson Pumps.

Among prominent manufacturers of steam pumps for various kinds of service is the Emerson Steam Pump Co., main office, Alexandria, Va. This company's pumps are wide and favorably known, and as an indication of their economical and efficient service the company is constantly receiving testimonials from users. A recent letter is from M. F. Marshall of Savannah, superintendent of Alsop & Pierce, Newport News, Va., who purchased a No. 2 and No. 3 pump. Mr. Marshall writes to the Hartfelder-Gorbutt Company, Savannah, agent of the Emerson Steam Pump Co., that these pumps took the place of two 10-inch centrifugals and two smaller pumps that had failed to perform the work required, namely, to pump out a cofferdam 50 feet deep with 20 feet of water. The Emerson pumps were installed at Mr. Marshall's suggestion, as he had handled them for several years on deep-river work without any expenditure for repairs. He states that after 20 years' experience on cofferdam work and the use of numberless pumps he has found none to compare with the Emerson. The Amburns Hydraulic Construction Co., 176 Federal St., Boston, Mass., writes to H. L. Bond Company, 391 Atlantic Ave., Boston, agent of the Emerson company, that its superintendent at Menominee, Wis., states that he has never had so little trouble with cofferdam pumps before, and that its superintendent at Cannon Falls, Minn., states that it is without exception the finest thing he has ever seen, as it requires little attention and takes off the water, keeping the sand practically dry all the time.

Reports Good Trade.

The Gregory Electric Co., 16th and Lincoln Sts., Chicago, reports unusually good trade both for export and domestic shipment. As indicating its operations it has recently shipped a carload of electrical machinery and engines to Sassa & Co., Tokyo, Japan; 40-kilowatt General Electric generator and other equipment to Angarita & Co., San Cristobal, Venezuela; two carloads of three-phase induction motors to the Cleveland Worsted Mills, Cleveland, O.; carload of three-phase motors and 500-volt generators to Wright & Sweeney Company, Tacoma, Wash.; carload of 220-volt direct-connected motors to Hart-Parr Company, Charles City, Ia.; carload of direct-connected 220-volt motors to Hicks Locomotive and Car Works, Chicago Heights, Ill.; carload of 220-volt direct-connected National motors to the Pacific Cooperation Co., San Francisco, Cal.; 300-kilowatt General Electric alternator to the Helena Gas Co., Helena, Ark.; 120-kilowatt General Electric direct-connected generator and engine to W. H. Lagb, Houghton, Mich.; 200-kilowatt 400-volt two-phase Westinghouse generator to Winters & Prophet Canning Co., Mt. Morris, N. Y., and a 200-kilowatt General Electric alternator to the Tiffin Electric Co., Tiffin, O. The Gregory Company has also made some heavy purchases of machinery, including 220-volt direct-connected motors in the plant of the Cadillac Automobile Co., Detroit, Mich.; lot of 110-volt direct-connected motors which were operating the New York shops of the Western Electric Co.; stock of new National direct-connected motors left in the factory of the National Brake & Electric Co., Milwaukee, and the 220-volt direct-connected motors in the plant of the Crane

Company, Chicago. It offers its customers an extensive stock of equipment to select from, and is prepared to make immediate delivery.

TRADE LITERATURE.

Duplex Steam-Driven Air Compressors

A pamphlet designated as Form No. 2006, illustrating and describing class "O" duplex steam-driven air compressors, has been issued by the Ingersoll-Rand Company, 11 Broadway, New York. This company is among the pioneers in the construction of air compressors, and claims to have combined all the latest improvements in machines of distinctly modern design.

The J-M Packing Expert.

The J-M Packing Expert, a monthly publication issued by the H. W. Johns-Manville Company of New York, Cleveland and other cities, is being distributed for June. Among its leading features is an article on "Mining Asbestos" and a view of the H. W. Johns-Manville Company's asbestos mines at Danville, P. Q., Canada. The company manufactures asbestos and magnesia products, including roofings, packings, electrical supplies, etc.

The Concrete Review.

Timely and interesting information may be found in the Concrete Review, bulletin No. 24, issued by the Association of American Portland Cement Manufacturers, Land Title Bldg., Philadelphia. This publication contains an article on reinforced concrete for houses, with special reference to architectural details, and presents photographs of various kinds of structures in which Portland cement has been employed.

Reinforced Concrete for Houses.

Vulcanite pamphlet No. 8, published for gratuitous distribution by the Vulcanite Portland Cement Co., Land Title Bldg., Philadelphia, and Fifth Avenue Bldg., New York, is now being distributed. This publication presents a treatise on "Reinforced Concrete for Houses," as contained in an address by Benjamin A. Howes, engineer, before the Association of American Portland Cement Manufacturers, Hotel Astor, New York, December 15, 1909. It also shows interesting photographs of structures in which Vulcanite Portland cement was used.

Jeffrey Crushers and Pulverizers.

Attesting the merits of the Jeffrey products are lists of prominent firms and others using the Jeffrey pulverizers, alfalfa mills, shredders, roll crushers, etc., as enumerated in catalogue No. 31-C issued by the Jeffrey Manufacturing Co., main offices, Columbus, O. This publication comprehensively describes, with drawings and specifications, the equipments referred to and illustrates them with photographic views. Attention is directed to the latest models of the Jeffrey swing-hammer pulverizers listed on pages 4 to 9, inclusive, of the catalogue.

Conveying Machinery for Coal Mines

Revised booklet No. 95, illustrating and describing Link-Belt conveying machinery for coal mines, is being distributed by the Link-Belt Company, Philadelphia, Chicago, New York and other cities. This company erects coal tipples, retarding conveyors, car hauls, coal washeries, etc., and since January of this year has received contracts to equip with retarding conveyors and tipple outfits new operations of the Bottom Creek Coal & Coke Co., New River & Pocahontas Consolidated Coal Co., McDowell Coal & Coke Co., Thacker Coal & Coke Co. and the Majestic Collieries Co.

Purchasing Power.

The cost of engineering and building construction is materially affected by the strength of purchasing service. The Stone & Webster Engineering Corporation, Stone & Webster Bldg., Boston, Mass., states that it purchases about \$8,000,000 worth of engineering equipment, material and supplies annually at a minimum of cost, and offers this advantage to its clients in the building of water-powers, steam electric plants, transmissions, electric railways, buildings, or in the electrification of steam roads. It has issued a card bearing on the advantages of its purchasing power.

Everything for the Thresherman.

A large and complete catalogue of threshing machinery and supplies, embracing the products of the "Port Huron line," has been issued by the Port Huron Engine & Threshing Co., Port Huron, Mich. This company manufactures and sells cornhusk shredders, corn shellers, engines, hay presses, malleable iron and brass castings, traction plows, road

machinery, sawmill machinery and supplies, threshing machines, wagons, water tanks, etc. Its products are illustrated and comprehensively described in the catalogue, which also presents specifications, together with details regarding their economy and efficiency.

New Cement Directory.

The 1910 edition of the American Cement Directory has been issued by the Technical Press, Ford Bldg., Detroit, Mich. In addition to containing a directory of the Portland cement plants in active operation and those not in operation, but either idle, being rebuilt or under construction, this directory shows the types of grinding machinery used on the coal, raw side and clinker side of the various Portland cement plants in the United States and Canada. A brief history of the Portland cement industry is also included. The directory is published in vest-pocket form, making it very convenient for ready reference.

Foundry Heating and Ventilation.

From time to time the Green Fuel Economy Co. of Matteawan, N. Y., distributes interesting literature bearing upon its activities, and a recent pamphlet which it has issued illustrates and describes a foundry heating system which it installed in the new foundry of the Waterbury (Conn.) Castings Co., and a shop heating and ventilating system installed in the Abendroth & Root Manufacturing Co.'s plant at Newburgh, N. Y. Among the products of the Green Fuel Economy Co. are fuel economizers, fans, hot-blast steam air heater coils, waste-heat air heaters, mechanical draft, heating, ventilating and drying equipment, draft dampers, engines, etc.

Crusher Talk.

The condition which has made the crushing of rock, ores, coal and other refractory substances so expensive for machinery is said to be due to the necessity of consecutive operation in order to produce a product of given fineness. Mitchell's improved crusher, by its ability to grind while it crushes, is claimed to be able to obtain a fine product from one operation. This crusher is manufactured by the Eureka Stone & Ore Crusher Co., Cedar Rapids, Ia., and is claimed to be superior in its simplicity, principle of operation, material used in its construction, oiling devices, hand-wheel adjustment, safety toggle plate and economy in installation. It is illustrated and described in literature which the company is distributing.

Transmission of Power by Manila Rope.

An interesting article on "The Transmission of Power by Manila Rope" has recently been prepared by William B. Hosford, first vice-president of the Dodge Manufacturing Co., Mishawaka, Ind. Mr. Hosford has a wide acquaintance in the engineering world and has had much experience in rope-drive problems. In the treatment of his subject he refers specifically to chains, belts and ropes, continuous progress, systems of rope driving, tension for driving, rope-drive design, the value of experience, care of rope drives, rope dressings, splicing the rope, unclogging without kinking, changing belt drives to rope, and other points.

Canton Culvert Literature.

The Canton Culvert Co. of Canton, O., manufacturer of "Acme" (nestable) corrugated "No-Co-Ro" metal culverts, "Duro" perforated corrugated railway drains, etc., has recently mailed to all railway engineers and maintenance-of-way men, prominent road contractors and others throughout the country, an attractive four-page circular-letter embodying references to business with the United States Government, foreign governments, prominent railways, etc. The circular reproduces several pages from the company's illustrated 24-page brochure entitled "Acme" Culverts for Steam and Electric Railways, and withal presents strong evidence that "Acme" culverts, made of the characteristic heavy-gauge highly rust-resistant "No-Co-Ro" metal galvanized sheets, are in exceptional favor with the best judges and largest users of culverts everywhere.

De Laval Centrifugal Pumps.

Illustrating and describing the De Laval improved centrifugal pumps is a catalogue now being published by the De Laval Steam Turbine Co., manufacturer of steam turbines, turbine machinery, etc., sales offices and plant, Trenton, N. J. The illustrations of this publication are complete as to the construction of the pumps and their application under a great variety of services, such as boiler feeding, water-works, mine pumping, bilge pumps, etc., and also with

relation to the different methods of driving, as by steam turbine, motor belt, water-wheel, steam engine, etc. Attention is directed to pages 5 to 17, which discuss pump characteristics and the methods of testing, and to page 29, presenting a discussion of impeller design, suggesting a new method of analyzing energy losses, and explaining why the small-diameter impeller is more efficient than the large-diameter impeller. Water joints, leakage and balancing are comprehensively described on pages 37 to 42, 51, 53 and 54, while the drawings and photographs on other pages are interesting. The characteristics of pumps for different services and the hints on drawing specifications for centrifugal pumps, as contained in the catalogue, should be of value.

THE PRICE OF COTTON.

A Plea for Diversification of Crops in the South.

Business Men's Club,

Gadsden, Ala., June 10.

Editor Manufacturers' Record:

The publication on the front cover of your paper of the 9th inst., from the New York *Financial Chronicle* headed "South's Cotton Supremacy" should be a great solace to the people of the South, and more especially to the cotton producers. While in a sense it is up to the Southern planter to make it his business to do all he can to provide for the great requirements of the cotton users and manufacturers of the world, it is more important to the Southern planter to make it his first duty to diversify his crops so as to make a living at home. The Southern planter who has made it a rule to fill his own corn crib and smokehouse and is raising his own living at home is the man who has prospered and has money in the bank.

The South's cotton supremacy is no dream, but it has caused much hard labor and toil and a deprivation of education of untold millions of our boys and girls in our beautiful Southland. I have had the practical experience, having been raised on a farm and labored raising cotton for my father to pay security debts incurred for sale of slaves during the Civil War. It has been demonstrated that 10,000,000 bales of cotton will bring as much or more money than 13,500,000 bales. Hence, why should the Southern planter neglect his home supplies to furnish cheap cotton for the world?

In the issue of your paper of May 19 I was very much interested in what Lewis W. Parker, president of the American Cotton Manufacturers' Association, had to say, and I fully endorse his views with a few exceptions only. President Parker says:

"There is no necessary conflict between the manufacturer and producer, and there should be no feeling on the part of the manufacturer that he desires to see a reduction in price of raw material below that which would yield to the producer a fair return, and, indeed, a good return for his labor; but, owing to conditions beyond our control, in the past the manufacturer has learned by dear experience that it matters not what the supply, and it matters not what the demand, there will be violent fluctuations to unsettle trade and throw the burdens thereof entirely upon him."

Why is it that the Southern planter had to shoulder the entire burden on account of conditions that has prevailed in the past that President Parker refers to? Is not the answer, the lack of independence, for the necessity of having a living at home, instead of being dependent on cotton alone as a means of earning a livelihood? Again, in your issue of the 9th inst., your criticism of Mr. C. W. Macara, chairman of the International Federation of Master Cotton Spinners and Manufacturers, I think very timely and your premises well taken. President Parker and Chairman Macara seem to somewhat diverge in their views. It is my honest

opinion, however, they would both like to have cheap cotton, regardless of how it affects the Southern cotton planter. Congress should pass some wholesome laws, either to regulate the form of gambling contracts of our cotton exchanges or to abolish the exchanges altogether. The members of the exchanges neither toil nor spin, but they have their milk and honey and live on the fat of the land. If they are allowed to exist they should be required to make a stipulated contract. Say for illustration, 50,000 pounds of cotton, about 100 bales, middling cotton, strict middling cotton or good middling cotton, whatever the grade may be, force them to specify it, and not allow them to issue a contract as they do now, viz., "50,000 pounds of cotton, about 100 bales basis middling at the seller's option, etc." It is the basis feature and seller's option that furnishes the key for gambling. If they are made to stipulate their contracts when the mills find the market depressed they will buy them and demand the cotton and the future contracts can be used as a hedge.

W. R. PHILIPS,
Secretary.

[Mr. Philips is mistaken in believing that Mr. Lewis W. Parker of the American Cotton Manufacturers' Association would like to have cheap cotton regardless of how it affects the Southern cotton planter. In his address at the annual meeting of his association at Charlotte, Mr. Parker distinctly said: "By higher prices the prosperity of a large section of the nation is made sure, and the consumptive power of many millions of people is increased. The cost of living throughout the whole United States, as is notorious, has greatly increased; all foodstuff has risen in value, and most lines of manufactured articles. The farmer who produced cotton has found a steady increase in his costs of production; the wages have increased, for in my boyhood days on the farm the farm hand was employed at a wage of \$6 to \$8 a month and scanty rations, whereas that same farm hand today receives \$15 to \$25 per month, with more bountiful rations. It is therefore natural that the planter should expect and demand a higher price for his product. This product must be expected to be upon a higher level of price than it has been in times past, and even the relatively high price prevailing during the last fall and winter, and now prevailing, is not out of proportion to other agricultural products and to the great mass of manufactured articles, many of these having risen in value, as compared with conditions of 30 years ago, 100 per cent., whereas cotton today is not above 50 per cent. higher than what may be termed its normal price in times past."—Editor MANUFACTURERS' RECORD.]

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., June 22.

In the Baltimore stock market during the past week business was generally quiet. The trading showed sales thus: United Railways common, 13 to 13½; do. trust certificates, 13¼ to 14; do. incomes, 58¼ to 58½; do. funding 58, 80½ to 80¾; do. do. scrip, 80½ to 81; United 48, 83¾ to 84¼; Consolidated Gas, Electric Light & Power common, 60; do. preferred, 88; Consolidated Gas 4½s, 91½; Seaboard Air Line common, 21 to 21½; do. preferred, 32; Seaboard Company common, 22 to 22½; do. do. first preferred, 75

to 77½; do. do. second preferred, 43 to 44½; Seaboard 4s, 84; do. do. stamped, 82¾ to 83¼; do. three-year 5s, 99½ to 99¾; do. 10-year 5s, 99¾; do. adjustment 5s, 74 to 75; Consolidated Cotton Duck preferred, 20½ to 22; Mt. Vernon-Woodberry Cotton Duck 5s, 73½ to 72¾; G.-B.-S. Brewing common, voting trust, 1¼; do. incomes, 7½; do. 1sts, 42.

Bank stock sold as follows: Mechanics', 27 to 28; Bank of Baltimore, 121½; Bank of Commerce, 30½; Merchants', 178½. Mercantile Trust sold at 141; American Bonding, 80 to 79; Maryland Casualty, 90 to 91; Baltimore Trust, 170 to 165.

Other securities were traded in thus: Baltimore City 3½s, 1980, 80 to 90; do. 5s, 1916, W. L., 105; do. 4s, 1960, 101; do. do. 1920, H. R., 100; do. do. 1925, W. M., 100; George's Creek Coal & Iron, 14; Virginia Midland 2d, 100¾; Virginia Electric Railway & Development 5s, 102¼; Atlanta Consolidated Street Railway 5s, 104½; Maryland Electric 5s, 97; Fairmont & Clarksburg Traction 5s, 95½; Norfolk & Portsmouth Traction 5s, 82¾; Chesapeake & Ohio convertible 4½s, temporary certificates, 93¾; Jamison Coal & Coke, George's Creek scrip, 90¼ to 90¾; Houston Oil common, 7; Atlantic Coast Line Consolidated 4s, 93½; Northern Central 5s B, 108½; Florida Southern 4s, 91 to 90½; Wilmington & Weldon 5s, 109 to 108¾; Northern Central Railway stock, 127½ to 127; Baltimore Electric 5s, stamped, 84¼; Charleston City Railway 5s, 102; Georgia & Alabama Consolidated 5s, 101¾ to 102; Norfolk Railway & Light 5s, 99½; Central Railway 1st Con. 5s, 107¼; Consolidation Coal, 111½; Washash Equipment 5s, 1921, 98; Charleston Consolidated Electric 5s, 92.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
June 22, 1910.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast.....	100	120½	121
Atlantic Coast of Conn.....	100	232	240
Georgia Sou. & Fla. 1st Pfd.....	100	91¾	92
Seaboard Company Common.....	100	23½	24
Seaboard Company 1st Pfd.....	100	77	77½
Seaboard Company 2d Pfd.....	100	43	45
United Ry. & Elec. Co.....	50	13¾	13¾
Bank Stocks.			
Citizens' National Bank.....	10	38½	39
Drexler & Mech. Nat. Bank.....	100	166	170
First National Bank.....	100	140	145
German-American Bank.....	100	106	108
Maryland National Bank.....	20	23	24
Merchants' National Bank.....	100	180	180
National Bank of Baltimore.....	100	121¼	124
National Exchange Bank.....	100	156	164
National Howard Bank.....	10	13½	14¼
National Marine Bank.....	30	42	42
National Mechanics' Bank.....	10	27½	28
National Union Bank of Md.....	100	121	121
Second National Bank.....	100	190	190
Western National Bank.....	20	36½	37¼
Trust, Fidelity and Casualty Stocks.			
American Bonding Co.....	25	79¼	79½
Baltimore Trust.....	100	166	170
Fidelity & Deposit.....	50	150	150
Maryland Casualty.....	25	50	50
Mercantile Trust & Deposit.....	50	141	141
Safe Deposit & Trust.....	100	500	500
U. S. Fidelity & Guaranty.....	100	135	138
Miscellaneous Stocks.			
Con. Cotton Duck Common.....	50	6	6½
Con. Cotton Duck Pfd.....	50	21	21½
Con. Gas, Elec. Lt. & P. Pfd.....	100	58	61
Con. Gas, Elec. Lt. & P. Pfd.....	100	83½	88
Consolidation Coal.....	100	110	112
G.-B.-S. Brewing Co.....	100	1	1½
Georges Creek Coal.....	100	14	14
Mer. & Miners' Trans. Co., V. T.....	100	72	77½
Railroad Bonds.			
Atlanta & Birmingham 4s.....	80	90	90
Atlantic Coast Line 1st 4s, 1922.....	93¾	94	94
At. Coast Line Com. 4s, Cfs., 5-20s.....	90	90	90
Balto. & Harrisburg Ext. 5s, 1938.....	91	91½	91½
Carolina Central 4s, 1948.....	91	91½	91½
Coal & Coke Railway 5s.....	98	91½	91½
Florida Southern 4s, 1940.....	101½	102	102
Georgia & Alabama 5s, 1942.....	104	105	105
Georgia, Car. & North. 1st 5s, 1923.....	104	105	105
Georgia Pacific 1st 5s, 1922.....	104	105	105
Georgia South. & Fla. 1st 5s, 1945.....	104½	105	105
Maryland & Penna. 4s, 1951.....	85	90	90
Potomac Valley 1st 5s, 1941.....	107	112	112
Savannah, Fla. & West. 5s, 1934.....	111½	112½	112½
Seaboard Air Line 4s, 1950.....	84	84	84
Seaboard 4s, Stamped.....	83¼	87½	87½
Seaboard Air Line 5s, 10-year, 1911.....	96¼	99½	99½
Seaboard Air Line 5s, 3-year.....	99¼	99¼	99¼
Seaboard Adjustment 5s.....	75	75¼	75¼
Silver Spgs., Ocala & G. 4s, 1918.....	94¾	97	97
Virginia Midland 2d 6s, 1911.....	100¾	100¾	100¾
Washington & Vandemere 4½s.....	95½	95½	95½
Western N. C. Con. 6s, 1914.....	104½	105½	105½
West Va. Central 1st 6s, 1911.....	109½	109½	109½
Wilmington & Weld. Gold 5s, 1935.....	108½	109	109
Street Railway Bonds.			
Atlanta Con. St. Ry. 5s.....	104½	104½	104½
Augusta Ry. & Elec. 5s, 1940.....	101½	102½	102½
Balto., Catonsv. & E. M. 5s.....	102¾	102¾	102¾

Balto. City Pass. 5s, 1911.....	99¾	99¾
Balto. Sp. Pt. & C. 4½s.....	83	83
Balto. Trac. 1st 5s, 1923.....	107	107
Balto. Trac. (N. B. Div.) 5s, 1942.....	110	111
Charleston City Ry. 5s, 1923.....	102	102½
Charleston Con. Elec. 5s, 1909.....	92	94
City & Suburban 5s (Balto.), 1922.....	106¼	106¼
City & Suburban 5s (Wash.), 1948.....	103	103
Fairmont & Clarksburg 5s.....	95½	95½
Knoxville Trac. 1st 5s, 1923.....	102	103
Lexington Railway 1st 5s, 1949.....	96½	97
Maryland Electric Railway 5s.....	91	92
Newport News & Old Pt. 5s, 1938.....	96½	96
Norfolk & Portsmouth Trac. 5s.....	83	83
Norfolk Railway & Light 5s.....	93½	93½
Norfolk Street Railway 5s, 1944.....	105	105
Richmond Traction 5s.....	104¾	104¾
United Railways 1st 4s, 1949.....	83¾	84
United Railways Inc. 4s, 1949.....	58½	58½
United Railways Fdg. 5s.....	80½	81

Miscellaneous Bonds.

Ala. Con. Coal & Iron 5s.....	81½	81½
Baltimore Electric 5s, Stpd.....	83	85
Consolidated Gas 5s, 1939.....	107½	107½
Consolidated Gas 5s, 1940.....	91	92
Fairmont Con. 1st 5s.....	94½	95½
G.-B.-S. Brewing 1st 4s.....	41¾	42¾
G.-B.-S. Brewing Inc. 5s.....	7	7½
Jamison Coal & Coke Geo. Ck. 5s.....	88¼	91
Mt. Vernon-Woodby Cot. Duck 5s.....	72½	72½

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending June 20.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	75	75
Alken Mfg. Co. (S. C.).....	90	90
American Spinning Co. (S. C.).....	160	160
Anderson Cotton Mills (S. C.).....	53	55
Arrendia Mills (S. C.).....	100	100
Arkwright Cotton Mills (S. C.).....	100	100
Augusta Factory (Ga.).....	60	65
Avondale Mills (Ala.).....	116	116
Belton Mills (S. C.).....	137	140
Brandon Mills (S. C.).....	99	102
Cannon Mfg. Co. (N. C.).....	135	135
Cabarrus Cotton Mills (N. C.).....	130	135
Chadwick Mfg. Co. (N. C.) Pfd.....	100	100
Chiquola Mfg. Co. (S. C.).....	180	180
Clinton Mfg. Co. (S. C.).....	105	105
Clinton Cotton Mills (S. C.).....	120	120
Columbus Mfg. Co. (Ga.).....	98	98
Courtney Mfg. Co. (S. C.).....	100	100
Dallas Mfg. Co. (Ala.).....	99	99
Darlington Mfg. Co. (S. C.).....	84	92
D. E. Converse Co. (S. C.).....	100	100
Drayton Mills (S. C.).....	96	106
Eagle & Phenix Mills (Ga.).....	117	117
Enslay Cotton Mills (S. C.).....	175	185
Enoree Mfg. Co. (S. C.).....	67	60
Enoree Mfg. Co. (S. C.) Pfd.....	95	100
Enterprise Mfg. Co. (Ga.).....	80	85
Exposition Cotton Mills (Ga.).....	900	900
Gaffney Mfg. Co. (S. C.).....	80	85
Gainesville Cotton Mills (Ga.).....	75	80
Glenwood Cotton Mills (S. C.).....	100	102
Gluck Mills (S. C.).....	100	100
Granby Cot. Mills (S. C.) 1st Pfd.....	35	45
Graniteville Mfg. Co. (S. C.).....	160	165
Greenwood Cotton Mills (S. C.).....	155	161
Grendel Mills (S. C.).....	114	117
Hartsville Cotton Mill (S. C.).....	175	175
Henrietta Mills (N. C.).....	160	175
Imman Mills (S. C.).....	104	106
Kling Mfg. Co., J. P. (Ga.).....	90	93
Lancaster Cotton Mills (S. C.).....	130	130
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Langley Mfg. Co. (S. C.).....	120	127
Laurens Mills (S. C.).....	127	127
Lincolnton Mills (S. C.).....	100	120
Lockhart Mills (S. C.).....	75	85
Lockhart Mills (S. C.) Pfd.....	99	100
Loray Cotton Mills (N. C.) Pfd.....	95	97½
Marlboro Cotton Mills (S. C.).....	80	85
Mills Mfg. Co. (S. C.).....	102	102
Molokoh Mfg. Co. (S. C.).....	106	110
Monaghan Mills (S. C.).....	155	155
Monarch Cotton Mills (S. C.).....	105	107
Newberry Cotton Mills (S. C.).....	125	130
Ninety-six Cotton Mills (S. C.).....	140	140
Norris Cotton Mills (S. C.).....	125	130
Olympia Cotton Mills (S. C.).....	90	90
Orr Cotton Mills (S. C.).....	109	112
Pacolet Mfg. Co. (S. C.).....	101	101
Pacolet Mfg. Co. (S. C.) Pfd.....	99	102
Pelzer Mfg. Co. (S. C.).....	169	169
Piedmont Mfg. Co. (S. C.).....	175	177
Poe Mfg. Co., F. W. (S. C.).....	170	180
Saxon Mills (S. C.).....	127	127
Shilley Mfg. Co. (Ga.).....	131	131
Spartan Mills (S. C.).....	131	140
Trion Mfg. Co. (Ga.).....	130	140
Tucapau Mills (S. C.).....	300	300
Union-Buffalo (S. C.) 1st Pfd.....	74	80
Union-Buffalo (S. C.) 2d Pfd.....	17	25
Victor Mfg. Co. (S. C.).....	154	154
Warren Mfg. Co. (S. C.).....	107	107
Warren Mfg. Co. (S. C.) Pfd.....	106	110
Washington Mills (Va.).....	23	23
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	122	122
Winnsboro Mills (N. C.).....	135	135
Woodruff Cotton Mills (S. C.).....	125	130
Woodside Cotton Mills (S. C.).....	102	105
Watts Mills (S. C.).....	90	95
Williamson Mills (S. C.).....	120	125

FINANCIAL CORPORATIONS.

Ala., Stevenson.—The First National Bank of Stevenson, capital \$25,000, will, it is stated, soon begin business with directors thus: W. J. Talley, president; J. Z. Schuit, first vice-president and cashier; O. L. Bonn, second vice-president; C. N. Coffee, J. P. Russell, Sr., J. T. Walker, A. Sentell, G. H. McMahon, G. H. Caperton, George Allison and P. H. Woodall.

Ala., Prattville.—The Fidelity Securities Co. of Prattville, capital \$200, has filed articles of incorporation; incorporators, W. E. Gibson, president; C. T. Kent, secretary and treasurer, and Walter Stewart.

Ark., Charleston.—A new bank, capitalized at \$70,000, is reported organized with Elmer Means, cashier.

Ark., Forrest City.—The Citizens' Bank, capitalized at \$50,000, is reported organized

with directors thus: S. H. Mann, president; T. O. Fitzpatrick, vice-president; A. J. Vaccaro, I. W. Mallory, E. P. Taylor, Lindsey Bridgforth and Sol Lewis. H. A. Knight is secretary-treasurer.

Ark., Little Rock.—The England Loan & Trust Co., authorized capital \$250,000, has been incorporated by J. E. England, J. E. England, Jr., Lloyd England, Shelby England, C. K. Lincoln, S. V. Bracy, J. H. Bilheimer, Thos. Lafferty and M. B. Sanders; business has begun with J. E. England, president; J. H. Bilheimer, vice-president; J. E. England, Jr., treasurer, and Lloyd England, secretary; offices are in the England National Bank, with which the new company is affiliated.

Ark., Nimmmons.—The Bank of Nimmmons, capital \$10,000, has been incorporated by H. W. Moore, president; J. H. Thomas, W. D. Templeton, A. C. Dunlap and J. W. Myers.

D. C., Washington.—The National Exchange Bank has been approved; capital \$300,000; organizers, Albert F. Fox, Charles B. Bailey, Geo. W. F. Swartzell, B. H. Warner, Jno. Joy Edison and B. F. Leighton.

Ga., Adel.—Official: The First National Bank of Adel chartered; capital \$25,000; D. C. Ashley, Valdosta, Ga., president; J. T. Wilkes and A. W. Parrish, vice-presidents; J. E. Pitts, cashier. Business is to begin July 1.

Ga., Vidalia.—The First National Bank has been approved; capital \$35,000; organizers, Geo. S. Rountree, Arthur Thompson, L. D. Williamson, J. W. Sharp and W. O. Donovan.

Ky., Bethel.—The Bethel Bank, capital \$15,000, is reported incorporated by Jacob Boyd, John Dickens and W. E. Ballinger.

Ky., Harlan.—The First National Bank of Harlan has been authorized to begin business; capital \$40,000. John B. Lewis is president; A. B. Cornett, vice-president, and W. W. Lewis, cashier.

La., Loreauville.—A new bank capitalized at \$25,000 is reported organized with Dr. J. W. K. Shaw as president; C. F. Bernard, vice-president, and J. O. Bonin, cashier.

Ky., Lovelaceville.—The Bank of Lovelaceville, capital \$15,000, expects to begin business September 3 with directors thus: L. E. Stevens, Ed. Elliott, D. E. Stall, Dr. Thompson, J. K. Rudolph, M. H. Rudolph and M. Wyman. Mr. Stall will be president and Mr. Wyman, cashier.

La., DeRidder.—The Lumbermen's State Bank, capital \$20,000, has filed its charter. The directors include C. A. Paxson, president; C. C. Davis, first vice-president; Geo. C. Shipper, second vice-president; J. S. Roberts, S. W. Smith, M. P. Nolan, J. H. Lewis, E. F. Presley and J. W. Toole, cashier.

La., Mansfield.—The People's Bank, capital \$55,000, is reported to have begun business. D. G. Petty is president; W. P. Head, cashier; George Rives, assistant cashier.

La., Marksville.—Official: The Union Bank chartered; capital \$25,000; incorporators, M. Betteve, president; C. P. Couvillion, first vice-president; M. Michel, second vice-president, and R. H. Washburn, Jr., cashier. Business is to begin about September 1.

La., Vinton.—A bank is soon to be opened, it is stated, by the Calcasieu Trust and Savings Bank. A. H. Jones will be manager.

Md., Havre de Grace.—The Havre de Grace Banking & Trust Co. has elected Isaac Hecht, president; Murray Vandiver, first vice-president; Joseph C. Parker, second vice-president, and A. Hamlin Carver, secretary and treasurer.

Md., Towson.—The Dupont Park Permanent Building and Loan Association of Baltimore County has filed articles of incorporation; incorporators, Samuel M. Lucas, William W. Hall and Madison E. Lloyd.

Mo., Kansas City.—The Globe Surety Co. has been granted a charter; capital \$500,000; directors, E. F. Swinney, Walter S. Dickey, Bernard Corrigan, William Huttig, John Kelly, J. A. Edson, William A. Pickering, Alexander Rothenberg, W. T. Kemper and James Van Buren of Kansas City, Milton Tootle, Jr., of St. Joseph and W. S. Wood of Excelsior Springs.

Okla., Elmer.—E. S. Locke is cashier of the new Farmers' State Bank of Elmer, and not E. S. Craig, as previously stated.

Okla., Enid.—A new bank is reported being organized with \$50,000 capital by local business men.

Okla., Oklahoma City.—The Capital City Investment Co. of Oklahoma City, capital \$10,000, is reported chartered by H. S. McKeever, George W. McKeever and Edward Spiere.

[For Additional Financial News, See Pages 78 and 79.]

Established 1835
The Merchants National Bank
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 DOUGLAS H. THOMAS, President.
 WM. INGLE, Vice-President and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. H. DUNN, Asst. Cashier.
 Capital, \$1,500,000
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 Deposits, \$12,000,000
 Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.

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Hugh MacRae & Co.
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 Specialists in Steam R. R. Securities.
 Members New York Stock Exchange.
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 404 Connecticut Mutual Bldg., Hartford.
 Land, Tile & Trust Bldg., Philadelphia.

CROSS CREEK COAL COMPANY 6% Gold bonds, total issue \$250,000. All have been disposed of to investors and bankers in different parts of the country, including Saco, Maine; Boston, Mass.; Rochester, N. Y.; Westfield, Olean, Fredonia and Buffalo, N. Y.; Franklin, Coudersport, Pittsburgh, Smethport, Shamokin and Port Allegany, Pa.; Columbus, Dayton and Springfield, Ohio; Norfolk, Welch and Bluefield, W. Va.; Roanoke, Va.; Nashville, Knoxville, Jasper, Chattanooga and South Pittsburg, Tenn.; Atlanta, Ga.; Lowell, Mass.; East Orange, N. J., and Washington, D. C., until now there are but \$30,000 of them left. These bonds are first lien on 7000 acres of the best coal properties in Tennessee, and \$75,000 of this money is being spent on an up-to-date coal works with a capacity of about 1000 tons a day. Particulars will be furnished from the office, 1006 Mutual Life Building, Buffalo, N. Y. P. S.—A bonus of preferred stock will be given with the bonds.

GEO. M. CLARK
 Auditor and Public Accountant
 Room 315 James Building
 CHATTANOOGA, TENN.

INVESTMENT SECURITIES
 Southern Stocks and Bonds
 Municipal and Corporation
 Cotton Mill Stock a Specialty
 WM. S. GLENN Broker - SPARTANBURG, S. C.

CAPITAL \$1,000,000 SURPLUS, \$2,500,000
 RESOURCES MORE THAN \$11,000,000

The Baltimore Trust Co.

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 Successor to the
 International Trust Company of Maryland
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The National Exchange Bank

OF BALTIMORE, MD.

Hopkins Place, German and Liberty Sts.
 Capital, \$1,000,000
 July 15, 1908, Surplus and Profits, \$671,631.60

OFFICERS:
 WALDO NEWCOMER, President.
 SUMMERFIELD BALDWIN, Vice-Pres.
 R. VINTON LANSDALE, Cashier.
 C. G. MORGAN, Asst. Cashier.
 Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

Bank of Richmond

Capital and Surplus, \$1,500,000
 RICHMOND, VA.

JOHN SKELTON WILLIAMS, President.
 FRED'K E. NOLTING, 1st Vice-President.
 T. K. SANDS, 2d Vice-President and Cashier.
 H. A. WILLIAMS, Assistant Cashier.
 L. D. CRENSHAW, JR., Trust Officer.

In aiding the development of legitimate business enterprises, this bank believes that it performs a required duty, and to this end offers the services of a live, progressive bank, conservatively managed.

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 Artemas Smith, Esq., General Counsel.

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 Write for particulars.

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VIRGINIA-CAROLINA CHEMICAL CO.,
 Treasurer's Office,
 Richmond, Va., June 14, 1910.
 Dividend No. 59.

The Board of Directors have this day declared a dividend of TWO (2%) per cent., the same being consecutive quarterly dividend No. 59, on the Preferred Stock of this Company, payable July 15, 1910, when checks will be mailed to all preferred stockholders of record at the close of business on June 25, 1910, and, for the purposes of this dividend and of the annual stockholders' meeting, the transfer books of this Company (for both Preferred and Common stock) will be closed from 12 noon June 25 to 10 A. M. July 21, 1910.
 S. W. TRAVERS, Treasurer.

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for engineering materials are high, but recent Government Tests show that

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of every size and kind for every possible requirement. Samples Free. "The Blue Book of Rope Transmission" free upon request.

S. C., Hartsville.—The Realty Loan & Insurance Co. is reported to have been granted a commission; capital \$20,000; petitioners, M. S. McKinnon, J. C. Brunson, L. Vaughan and C. W. Coker.

S. C., Kingstree.—The Wee Nee Bank, recently chartered with \$30,000 capital, is reported to have elected officers thus: Hugh McCutcheon, president; W. V. Strong, vice-president, and E. Lamar Montgomery, secretary and treasurer.

S. C., Norris.—The Bank of Norris has been granted a commission; capital \$20,000; petitioners, E. W. Tate, L. G. Phillips, B. P. Kelley, J. P. Smith and J. H. Chapman.

S. C., Sumter.—Official: The Consolidated Insurance Co. of Sumter chartered; capital \$10,000; directors, Geo. D. Shore, president; W. B. Upshur, vice-president and secretary; Geo. F. Epperson, R. C. MacNeal, Thomas Wilson, J. W. Allen, C. P. Osteen and L. D. Jennings. W. J. Seale is manager and treasurer. Business began June 15.

Tenn., Flatwoods.—A new bank, capitalized at \$10,000, is reported being organized, with S. T. Sharp, president, and E. S. Chappell, vice-president.

Tenn., Statesville.—The Bank of Statesville, capital \$10,000, has been incorporated by R. H. Cox, L. D. Stroud, T. S. Harden, J. W. Jennings, W. G. Mullinax and C. S. Reeves; W. A. Barger, president; W. E. Donnell, first vice-president; W. F. Young, second vice-president; Claude Wood, cashier.

Tex., Como.—Official: The Como State Bank chartered; capital \$20,000. Business is to begin immediately with B. S. Lollar, president; C. B. Lynch and L. Canoll, vice-presidents, and W. L. Walker, cashier.

Tex., Dallas.—The Morgan Audit Co. of Dallas, capital \$1000, is reported incorporated by C. G. Morgan, C. Morgan, Jr., and J. S. Ruddock.

Tex., San Antonio.—The Central Trust Co., capital \$500,000, has completed its organization by electing officers thus: President, J. O. Terrell; vice-presidents, Alexander Joske, Charles Schreiner, Otto Koehler, R. R. Russell; secretary-treasurer, B. G. Barnes; directors, Alexander Joske, Charles Schreiner, J. O. Terrell, Otto Koehler, R. R. Russell, Albert Steves, B. G. Barnes, Roy W. Hearne, John J. Stevens, M. Baumbach, J. T. Wilson, Dr. Adolph Herff, J. W. Warren, Alfred Duerler, Atlee B. Ayres, Ed. Rand, Jesse D. Oppenheimer, Adolph Wagner, Marshall W. Terrell, John Fest and Sam C. Bell.

Tex., San Antonio.—The Equitable Life Insurance Co., capital \$500,000, is reported organized with James A. Brown, president of the First National Bank of Brownsville; S. L. Dwarmon, vice-president of the same institution, at Brownsville; Dr. Frederick J. Combe. The officers are Frederick J. Combe, president; Frank W. Vaughan, first vice-president; R. H. Russell, second vice-president; Edgar Schramm, third vice-president, and N. S. Graham, treasurer.

Tex., San Angelo.—The Concho Valley Loan & Trust Co., capital \$200,000, has perfected its organization by electing Judge T. C. Wynn of San Angelo president and C. C. Kirkpatrick secretary.

Tex., Sherman.—Official: The National Insurance Co. chartered; capital \$100,000; surplus \$100,000; McManus, Marshall & Strong, general agents and organizers. The contemplated officers are N. B. Birge, president; T. U. Cole, treasurer, and W. R. Brents, vice-president. Business is expected to begin about October 1. The company will have quarters in the Merchants & Planters' National Bank Bldg., now being constructed.

W. Va., Huntington.—The Second National Bank of Huntington will, it is reported, begin business about August 1 with \$1,000,000 capital.

NEW SECURITIES.

Ala., Birmingham.—Official: Thos. J. Bolger & Co. of Chicago were awarded at 103.20 the \$400,000 of 5 per cent. 30-year floating indebtedness bonds; denomination \$1000.

Ala., Castleberry.—Reported voted: \$100,000 of Concho county road bonds.

Ark., Little Rock.—W. B. Worthen & Co. were awarded \$27,000 of street-improvement bonds.

Fla., Pensacola.—Reported voted: \$150,000 of street-paving and \$100,000 of sewerage bonds; defeated, \$50,000 of market bonds.

Fla., Tallahassee.—Official: Bids will be received by A. H. Williams, City Clerk, until noon July 21 for \$15,000 of funding judgment indebtedness and \$15,000 of water-works, electric and gas-plant extension 5 per cent. 10-50-year bonds; denomination \$1000.

Fla., Fort Myers.—Owing to irregularities,

the school and sewer bonds voted at the recent election have been declared void and a new election is called for August 16. N. G. Stout is Clerk and Robert Lilly Mayor.

Ga., Cairo.—Official: Bids will be received until 4 P. M. July 28 for \$3000 of 5 per cent. water-system extension bonds; city also offers \$6000 of 5 per cent. electric-light extension bonds.

Ga., Dalton.—The \$125,000 of improvement bonds are soon to be offered for sale.

Ky., Guthrie.—School bonds are reported voted.

Ky., Hopkinsville.—Bids will be received until 1.30 P. M. July 1 for \$27,000 of 5 per cent. 30-year Christian county courthouse bonds; denomination \$1000. Address John C. Duffy, County Attorney.

Ky., Maysville.—An election is to be held in Mason county, it is reported, to vote on \$60,000 of county infirmity bonds.

Miss., Hazlehurst.—Bids will be opened by E. M. Cook, Mayor, on July 5 for \$15,000 of 5 per cent. bonds for extension to school building and water reservoir; dated July 1, 1910; maturity July 1, 1911 to 1930, inclusive; denominations: 20 of \$100 each, maturing annually 1 to 20 years; 46 of \$500 each, maturing in 20 years.

Miss., Oxford.—W. L. Smith, deputy city clerk, will receive bids until 7.30 P. M. July 6 for \$30,000 of 6 per cent. water, light and improvement bonds.

Miss., Osyka.—Official: City will issue \$20,000 of water-works and electric-light plant bonds. Clinton Thompson is Mayor.

Miss., Richton.—Reported that \$12,000 of school bonds are to be floated.

Miss., Seminary.—Reported that an election is to be held to vote on \$10,000 of school-building bonds.

Miss., Tupelo.—Official: On July 6, at the courthouse door, the Board of Supervisors of Lee county, Norbin Jones, Clerk, will offer for sale \$100,000 of road bonds.

N. C., Edenton.—Official: Bids will be received by W. J. Berryman, secretary Board of Drainage Commissioners, until noon June 30 for \$25,000 of 6 per cent. Bear Swamp Drainage District bonds.

N. C., Greensboro.—Official: The \$35,000 of 5 per cent. school bonds were purchased by the Western German Bank of Cincinnati, O. E. J. Grafflin is Mayor.

N. C., Raleigh.—An official letter confirms the report that N. W. Halsey & Co. of New York were awarded the \$150,000 of 5 per cent. municipal building and refunding bonds.

Okla., Duncan.—Reported that it is proposed to hold an election in Stephens county to vote on \$75,000 of courthouse-construction, \$10,000 of jail and \$25,000 or \$35,000 of road bonds.

Okla., Kingfisher.—The Oklahoma Bond & Trust Co. of Guthrie is reported to have purchased at par \$15,000 of 5 per cent. 15-year high-school building bonds.

Okla., Woodward.—An election is to be held, it is reported, to vote on \$35,000 of water-system improvement bonds.

S. C., Anderson.—Official: Election will be held June 25 to vote on \$2500 of 6 per cent. 20-year bonds of Cedar Grove District No. 30; denomination \$500; date of opening bids not yet fixed. Address R. E. Nicholson, superintendent, Anderson, S. C.

S. C., Chester.—An official letter confirms the report that bids will be opened June 21 for \$15,000 of 4½ per cent. 20-40-year school district bonds; denominations \$100, \$500 or \$1000, at buyers' option. Address J. C. McLure, secretary.

S. C., Ellmore.—Reported that on June 23 vote will be taken on \$10,000 of water and light bonds.

S. C., McColl.—Reported voted: \$20,000 of school bonds.

S. C., Mt. Pleasant.—Reported that an election will be held August 16 to vote on \$16,000 of water-works bonds.

Tenn., Covington.—Reported voted: \$15,000 of high-school bonds.

Tenn., Chattanooga.—Official: A bond issue of \$100,000 is projected. T. C. Thompson is Mayor.

Tenn., Maryville.—Bids will be received by Will A. McTeer, Recorder, until noon July 13 for \$30,000 of 5 per cent. 20-year municipal bonds. R. H. Hanna is Mayor.

Tex., Alvin.—Reported voted: \$4000 of water-works and \$12,000 of street 5 per cent. 40-year bonds. G. W. Sheffield is Mayor.

Tex., Atlanta.—Official: Precinct No. 7 of Cass county has voted \$40,000 of 5 per cent. 40-year road bonds. Address Martin Allday, secretary, Cass County Industrial League.

Tex., Austin.—The Attorney-General has

approved securities as follows: \$20,000 of 5 per cent. 10-20-year Roberts county common school district No. 42 schoolhouse bonds; \$8000 of 5 per cent. 20-40-year Cooper independent school district schoolhouse bonds; \$5000 of 5 per cent. 20-40-year Canadian street-improvement bonds; \$6000 of 5 per cent. 40-year Harris county common school district No. 31 schoolhouse bonds; \$1250 of 5 per cent. 10-year Harris county school district No. 14 bonds; \$1000 of bonds of Rendon school district No. 68; \$100,000 of 4½ per cent. 10-40-year Fort Worth improvement bonds; \$3000 of Lavin school district bonds.

Tex., Beeville.—Reports state that \$75,000 of Bee county courthouse bonds have been approved and will immediately be put on the market. Dan Troy is Clerk.

Tex., Burkburnett.—Bids will be received by W. W. Graham, secretary School Board, until June 25 for \$16,000 of 5 per cent. 10-40-year school bonds.

Tex., Coleman.—Official: Voted: \$20,000 of 5 per cent. 5-40-year electric-light-plant bonds; denomination, \$500; dated July 1, 1910; address the City Secretary; date for opening bids not yet fixed.

Tex., China.—The Attorney-General has approved \$12,000 of China School District school

bonds, and arrangements are now being made for their sale.

Tex., Dallas.—Reported that \$100,000 of school, \$100,000 of water-works improvements, \$100,000 of sanitary-sewer and \$350,000 of street-improvement bonds have been approved, and preparations for their sale is now being made.

Tex., Dublin.—Bids will be received until July 1 by S. H. Primm, president School Board, for \$30,000 of 5 per cent. 40-year school bonds.

Tex., Eastland.—Bids will be received until 4 P. M. June 23 by J. E. Butler, president of the Board of Education, for \$20,000 of 5 per cent. 20-40-year school bonds.

Tex., Ennis.—Reported voted: \$225,000 of road bonds.

Tex., Galveston.—Official: Bids will be received by John M. Murch, County Auditor, until noon July 11 for \$500,000 of 5 per cent. 20-40-year Galveston county road bonds.

Tex., Greenville.—An official letter confirms the report that W. A. Frazer, City Clerk, is receiving bids until 2 P. M. June 20 for \$100,000 of 4½ per cent. street-paving bonds; denomination \$500.

Tex., Groesbeck.—Official: July 9 an elec-

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tion is to be held to vote on \$125,000 of 5 per cent. 40-year bonds of Road District No. 1.

Tex., Hillsboro.—Bids will be received by Ed Woodall, Mayor, until noon July 1 for \$40,000 of 5 per cent. 15-40-year street-improvement bonds.

Tex., Kyle.—July 2 an election is to be held to vote on \$3000 of school bonds. Address Judge of Hays county, San Marcos, Tex.

Tex., Navasota.—July 19 an election is to be held to vote on \$20,000 of manual-training-school bonds.

Tex., Port Lavaca.—Reported voted: \$44,000 of Calhoun county courthouse bonds.

Tex., Killen.—Reported voted: \$14,000 of public school building bonds.

Tex., League City.—Reported voted: \$15,000 of 5 per cent. 20-40-year school-building bonds.

Tex., Richmond.—Official: Date will likely soon be fixed for opening proposals for the purchase of \$150,000 of 5 per cent. 10-40-year Fort Bend county road bonds of District No. 1, voted January 4, 1910; G. C. Baker, Jr., is County Judge.

Tex., San Marcos.—J. R. Porter, Mayor, writes: "We have no bond issue on hand

at present." This denies the report that \$20,000 of bonds have been voted.

Tex., Truscott.—Official: Truscott City is offering at private sale \$8000 of 5 per cent. 40-year school bonds; denomination \$500. Address J. J. Perry, secretary.

Tex., Winnsboro.—Bids will be received by W. D. Suiter, Mayor, until 3 P. M. June 21 for \$18,000 of 20-40-year water-works bonds.

Va., Bristol.—Official: H. E. Jones, chairman water committee, writes that \$60,000 of water-works 5 per cent. bonds are to be issued; denomination \$1000; John H. Gose is City Clerk.

Va., Eastville.—Official: Dr. J. Hall of Machipong, Va., purchased the \$5000 of 5 per cent. 20-year street-improvement bonds; denomination \$1000.

Va., King George.—Reported defeated: \$10,000 of King George county courthouse bonds.

Va., Lexington.—Reported voted: \$30,000 of street and road bonds.

Va., Stuart.—Reported defeated: Bonds for water-works.

W. Va., Keystone.—Official: The State of West Virginia purchased \$28,000 of 6 per

cent. 25-year water-works and jail bonds; denomination \$1000; C. C. Hale is Mayor.

At Edenton, N. C., bids will be received until noon June 30 for \$25,000 of 6 per cent. Bear Swamp Drainage District bonds. Further particulars will be found in the advertising columns.

At Tallahassee, Fla., bids will be received until noon July 21 for \$15,000 of 5 per cent. 10-50-year bonds for funding its judgment indebtedness and \$15,000 of 5 per cent. 10-50-year water-works, electric and gas plant extension bonds. Further particulars will be found in the advertising columns.

At Galveston, Tex., bids will be received until noon July 11 for \$500,000 of 5 per cent. 20-40-year Galveston county road bonds. Further particulars will be found in the advertising columns.

At Broken Arrow, Okla., bids will be received on or before July 11 for \$37,000 of 6 per cent. 25-year water-works bonds. Further particulars will be found in the advertising columns.

At Cairo, Ga., bids will be opened at 4 P. M. July 28 for \$9000 of 5 per cent. water-

system extension bonds. City also offers \$9000 of 5 per cent. electric-light extension bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The South Carolina Fire Insurance Agents' Association will hold its annual meeting at Columbia July 14 and 15.

The Southern Savings Bank of Wadesboro, N. C., according to press dispatches, will open a branch at Cameron, Tex.

The Virginia-Carolina Chemical Co., Richmond, Va., has declared a quarterly dividend of 2 per cent., payable July 15. S. W. Travers is treasurer.

The application of the Consolidated Gas, Electric Light & Power Co. of Baltimore, Md., to issue \$4,000,000 of 5 per cent. three-year gold notes, secured by bonds of the company, to refund \$5,584,500 of 6 per cent. bonds of the old company, has been approved by the Public Utilities Commission.

The Ruston State Bank of Ruston, La., is reported to have increased its capital from \$50,000 to \$100,000.

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Sale will be made without reserve to the highest bidder who satisfies the terms of this offer.

Cash or certified check for \$500 must accompany each bid, to be returned unless the bid be accepted; to be forfeited if the accepted bidder fails to complete the purchase, and to be applied on the purchase price of the successful performing bidder.

All bids will be opened at the time above appointed. The balance of the successful bid will be payable in cash on or before noon of the 29th day of July, 1910, at the office of Goodwin, Dresel & Parker, 84 State street, in the city of Boston, Mass., when transfer will be perfected.

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By Philip M. Reynolds,

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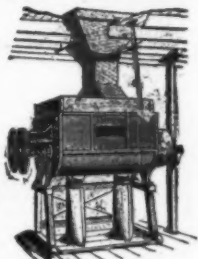


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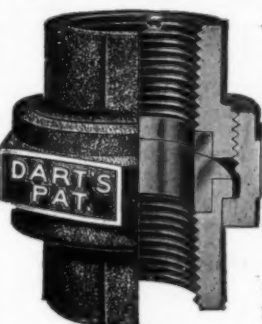
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MANAGER
 European—\$1.00 and Up.

In the Realm of Tags
Dennison "P" Standard
 Is the recognized hall-mark of superiority. It denotes a quality of stock and grade of manufacture that for fifty years has satisfied the shippers of the world. Let us know your requirements.
Dennison Manufacturing Co.
 THE TAG MAKERS
 BOSTON NEW YORK PHILADELPHIA CHICAGO ST. LOUIS

The Compliment
 of
 Competition

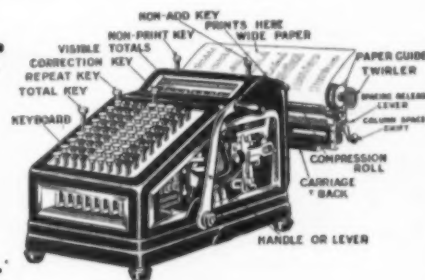
WALES

Adding
 and Listing
 Machine

A RECENT decision of the Supreme Court has finally put a quietus on the attempts of a competitor to secure control of the WALES. Approximately \$400,000 was spent by this competitor in unsuccessful efforts to obtain such control. What higher compliment could be paid to the practical value of the WALES? The WALES Visibility and other exclusive features, with the WALES mechanical excellence, have made its superiority acknowledged.

The Adder Machine Co.

Wilkes-Barre, Pa.



FACTORY TIME CHECKS



They are being used more and more. Write for our pamphlet "Time Checks and Their Use."
American Ry. Supply Co.
 Address Dept. J
 24 Park Place, N. Y.

Aluminum Company of America

Formerly The Pittsburgh Reduction Co.
PITTSBURGH, PA.

ALUMINUM

Electric Conductors, Ingots, Bars, Plates, Castings, Tubes, Sheets, Etc.

MACHINERY AND SUPPLIES

Engines, Boilers, Saw Mills, Power Transmission Goods, and a full stock of Machinery and Mill and Factory Supplies. General State Agents for Foss Mfg. Co.'s Gas and Gasoline Engines.

Stockdell-Myers Hdw. Co.

Petersburg, Va.

Classified Opportunities

AGENCIES WANTED

WANTED—The selling agency for a good specialty, patented article or special line of goods by an experienced salesman and manager; will pay prompt cash. Address P. O. Box 2558, Boston, Mass.

SOUTHERN agencies for building specialties wanted. Write the Southern Fireproofing Supply Co., Inc., Sales Agents for Herringbone Steel Lath, 1224 H St. N. W., Washington, D. C.

A WELL-ESTABLISHED manufacturers' agency in the Southwest wishes to add several lines of fire-preventive appliances; none will be considered unless bearing the underwriters' label. Correspondence with manufacturers solicited. Address P. O. 1312, Fort Worth, Texas.

SITUATIONS WANTED

MANUFACTURERS!—Are you looking for a party to fill the bill? Write us at once. We have what you want. Try us once. Central Employment Co., Huntington, W. Va.

WANTED—A job caring for cattle with a ranchman in Oklahoma or Colorado; willing to work reasonably; state salary after first month's work; will come at once. Bell phone, Main 4190-1; may call up 4 to 8 o'clock evening. O. Burnett, 86 Tenth St., Atlanta, Ga.

WANTED—Young man, college graduate, five years' business experience, desires position with some good manufacturing concern; chance of promotion more important than salary; can furnish best of references. Address Box 232, Suffolk, Va.

CIVIL ENGINEER, the South or Mexico, 7 years' experience railroad location, construction, development of mining and other properties, surveys, subdivision, drainage, harbor works; other experience; speaks Spanish; own instruments; best references. C. H., No. 2703 Austin street, Houston, Tex.

SUPERINTENDANT WANTED

WANTED—General superintendent; must be high-grade man, competent to take full charge of salesmen, office and general oversight of business and capable of promoting a new implement enterprise; state experience fully and give references; salary and consideration to right party. Address Chas. M. Ferrow, Box 227, Lynchburg, Va.

HELP WANTED

MAN to take position as bookkeeper for lumber company, \$1500; assistant, \$900; also manager for commissary, \$1200; give age and experience. American Opportunity Co., Houston, Tex.

YOUNG MAN thoroughly experienced in electrical supplies to handle correspondence and do clerical work in a large jobbing house; must be good correspondent and have good English education, with some commercial knowledge. Give references and state salary expected. None but first-class need apply. Address P. O. Box 201, New Orleans, La.

EDUCATIONAL

RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical and Electrical engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

ENGINEERS

P. BYRNE, Expert Mineral Engineer.—Information furnished about mineral lands; investigations and reports made on the same. 1801½ 2d Ave., P. O. B. 111, Birmingham, Ala.

BANKS

THE CITIZENS' BANK OF NORFOLK, Va., capital \$300,000, surplus \$375,000, solicits accounts of banks, firms, corporations and individuals.

THE PALMETTO NATIONAL BANK, Columbia, S. C., capital \$250,000, solicits accounts of banks, firms, corporations and individuals either commercial or savings accounts.

COMMERCIAL STATE BANK, Birmingham, Ala. State depository. Prompt attention to Alabama collections.

BANK OF ENSLEY, Ensley, Ala., capital \$100,000, surplus and profits \$50,000. Individual responsibility more than a million dollars. Collections made promptly.

BUSINESS OPPORTUNITIES

INVESTORS come to Gadsden, Ala., the new steel center of the South; great opportunities. The North Alabama Real Estate Co., Gadsden, Ala.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

WANT TO CORRESPOND with party interested in brick plant; have the shale, fuel, water, location and market. W. M. Kelly & Co., Waco, Texas.

WANTED—To correspond with railroad contractors able to build and operate six miles of road, which investigation will show to be profitable. North Fork Lumber Co., Azalea, N. C.

WANTED—Manufacturers' agents in all sections of the country to send us plans and specifications for estimates on slate and tile roofing, on a liberal commission arrangement. Address Kansas City Slate & Tile Roofing Co., 21st and Forest Ave., Kansas City, Mo.

WOODWORKING PLANT, well located and equipped for furniture making or other industry using wood, is waiting at Spartanburg for man seeking unusually good opportunity; best town in South. Address Chamber of Commerce, Spartanburg, S. C.

FOR RENT—AT LOUISVILLE, KY., the gateway to the South, business location on Fourth avenue, near Walnut street. This is the very heart of the fashionable retail section, near the New Seelbach Hotel, Stewart Dry Goods Co., and many other leading retail houses. For further information write Columbia Trust Co., 4th and Main streets, Louisville, Ky.

COTTON MILL WANTS PRESIDENT.—I have been asked by the directors of one of the best 10,000-spindle weaving mills in North Georgia to recommend a man for the presidency and active management of the business; must have "made good" in mill management and be able to invest from \$12,000 to \$15,000. This is a dignified business opportunity, carrying a good salary to the right man. I will be glad to hear from interested parties. T. H. Martin, Consulting Engineer, 929 Empire Building, Atlanta, Ga.

A LARGE CORPORATION establishing factories in the South and Western States desires the services of a few capable men as superintendents and office managers (factory experience not essential). To men of good judgment and integrity who can invest from \$3000 to \$5000 we can offer a splendid money-making proposition with an attractive salary from the start. Address, stating age and business experience. We also want several first-class road men. Address C. R. Ball, Pres., 107 W. Grand Ave., Oklahoma City, Okla.

GENERAL DRY GOODS.—In one of the best county site towns in Texas we have for sale, on account of the health of proprietor, one of the leading stores of the town. Stock is as clean as can be found anywhere. The business is in excellent shape, has splendid trade, owes nothing. This offers an exceptional opportunity for a live merchant to step into a paying business in one of the best locations in Texas, with unusually fine prospects for future growth. Investment required, about \$30,000. Might consider some in trade. Address for particulars, J. N. Winters & Co., Fort Worth, Texas.

LOCATIONS

GEORGIA'S FIVE-MILLION-DOLLAR CROP COUNTY.—If you are thinking of changing your location to the South, investigate Sumter county, the heart of Georgia's richest agricultural section; crops 1909 aggregating \$5,000,000 in value; cotton, corn, oats, hay, fruits, vegetables, tobacco; finest lands in Georgia at \$10 to \$30 an acre. If interested, send for pamphlet and further information to Thos. Gamble, Jr., Sec. Board of Trade, Americus, Ga.

HOTEL WANTED

AUSTIN, TEXAS, has the best location for a fine summer and winter resort hotel in the South. This is a much-needed improvement to Austin, and it is one that will be a payer from the start. Beautiful scenery, fishing, rowing, boating, and the finest drives in the country. Full particulars will be furnished on application to Will L. Vinling, Secretary Austin Business League, Austin, Tex.

INDUSTRIES WANTED

BRICK AND TILE FACTORY

WANTED—Brick and tile factory to locate at Avant, Osage county, Oklahoma; immense body of finest shale, affording supply for generations; soft running water free from alkali or other injurious ingredients; greatest supply of natural gas in State at 4 cents per thousand cubic feet; good railroad facilities; free shale for three years, thereafter nominal royalty; free factory site; absolutely no cash bonus. This proposition is probably best in Southwest. Scott Braden & Co., Oklahoma City, Oklahoma.

PEANUT OIL MILL

YOAKUM, TEXAS, offers an inviting field for the establishment of a peanut-oil mill. Correspond with W. W. McVey, Secretary Commercial Club, Yoakum, Texas, reference to inducements offered for such an enterprise.

HOSIERY MILL

A FREE SITE and the assistance of local capital if necessary are offered at Lynchburg, Va., for the location of a hosiery mill. Located at the logical distributing point of a territory of 27,000,000 consumers, Lynchburg has advantages anyone looking for a desirable location for an industry of this character would do well to consider. It has plenty of cheap white labor, the average weekly wage being \$10. Hydro-electric-power can be had at from one to four cents per K. W. per hour, with low freight rates, having three trunk lines and a direct connection with a fourth. Sanitary facilities and climate are excellent, this region being noted for its famous health resorts. Lynchburg markets goods amounting to more than a million per annum per thousand of population, and, notwithstanding its wonderful growth, is only at the threshold of a wonderful development. Complete information furnished by Chamber of Commerce, Lynchburg, Va. Send for booklet describing city's industrial growth.

SHIRT AND OVERALL FACTORY

SHIRT AND OVERALL FACTORY.—An Alabama city of about 8000 people, with fine transportation advantages and commanding the trade of a good section, offers an excellent opportunity for the manufacture of working shirts and of overalls. There is an abundance of labor. Refer to File 20,390. M. V. Richards, Land and Industrial Agent, Southern Railway, 1375 Pennsylvania avenue, Washington, D. C.

GARMENT FACTORY

ITASCA, situated in the heart of the great black land belt of Texas, wants a garment factory; growing town, with factories and schools. Address Board of Trade, Itasca, Texas.

CANNING FACTORY

WHY DON'T YOU manufacture shipping cans in Houston, Texas? Great opportunity; large quantities shipped in for local consumption; one plant alone consumes 100 carloads annually; other consumers are six coffee-roasting plants, two wholesale preserving plants and two wholesale drug houses; truck and fruit growers also large consumers. The right time to get in is now. Write for information to Adolph Boldt, Secretary Houston Business League, Houston, Texas.

WOODWORKING PLANTS

BAY CITY, TEXAS, wants a woodworking plant located there; has unlimited supply of good cottonwood and willow for excelsior, etc.; of fine ash for agricultural handles and for wagons and implements of all kinds, and the best of elm for barrel hoops; has three trunk lines of railway, good churches and schools, and is the center of the rice industry of Texas. If interested, address Ten Thousand Club, Bay City, Texas.

WOODWORKING PLANT.—Tributary to an excellent Alabama location for factories is an almost inexhaustible supply of gum timber of fine quality. The people would like to correspond with manufacturers who will consider the location of a plant to use it. Refer to File 20,390. M. V. Richards, Land and Industrial Agent, Southern Railway, 1375 Pennsylvania avenue, Washington, D. C.

BARREL, BOX AND CRATE FACTORY

SANFORD, FLORIDA, wants a barrel, box and crate factory; plenty timber available; all fruit and vegetables now shipped here from other places. Write C. O. McLaughlin, Room No. 2, People's Bank Bldg., Sanford, Fla.

FURNITURE FACTORIES

FURNITURE FACTORY.—Free site and liberal stock subscriptions for location of furniture factory of any kind. Abundance of raw material and unexcelled transportation facilities. Address Chas. R. Rowe, Secretary Lufkin Progressive League, Lufkin, Texas.

DENISON, TEXAS, wants a furniture factory. Can offer free site with switch; exemption from taxation for considerable period. Transportation facilities unexcelled; eleven railroad outlets. Denison right in heart of hard-timber belt; oak, cottonwood and hickory in unlimited quantities within wagon-hauling distance. Water for factories at from two to five cents per thousand gallons, dependent upon quantity used. Considering the above advantages, especially the transportation facilities, the fact that there is not a factory of any size in the Southwest, and that this section is settling faster than any other at present, Denison is ideal location for furniture factory. For detailed information write Secretary Live Wires, Denison, Texas.

GLASS FACTORY

ATLANTA, TEXAS, WANTS A GLASS FACTORY.—We have an unlimited quantity of glass sand that analyzes over 99 per cent, silica; natural gas in any quantity at satisfaction price; salt and lime manufactured close by; plenty of timber and water and other material; free site, free sand 20 years, exemption from city taxation 10 years, free artesian water to the first factory; transportation and rates all right. Write for full particulars on this and other factory propositions. Great opportunities. Cass County Industrial League, Atlanta, Texas.

DRUGS AND DRY GOODS

FINE OPENING for wholesale drug business, also wholesale dry goods business; three-fourths of a million people within radius of 100 miles, in a territory only one-fifth developed, but being developed rapidly; first-class shipping facilities; best quality of water, cheap fuel and high-grade citizenship. Address Abilene 25,000 Club, Box No. 537, Abilene, Texas.

MISCELLANEOUS

A GOOD LOCATION for a hosiery mill, overall factory, iron foundry and similar enterprises; ample railroad facilities; inducements offered to the right parties. For information address the Stamford Commercial Club, Homer D. Wade, Secretary, Stamford, Texas.

QUANAH wants a cotton mill, meat-packing plant, shoe factory; large amount of stock ready to be taken or bonus given for any of these enterprises; four railroads; immense distributing territory; city growing 25 per cent. annually. Chamber of Commerce, Quanah, Tex.

FREE SITES and concessions on taxes, water and fuel given to factories to locate in McAlester, Oklahoma, the manufacturing city of the Southwest; cotton, fire clay, brick shales, iron, limestone, lumber and many other raw materials. Ask the Commercial Club, McAlester, Oklahoma.

SNOW HILL, MD., wants factories and canneries; cheap labor; no unions; no strikes; rich farming country; cheap raw material; railroad and water facilities; beautiful, healthy town; living expenses low; factories locating here always prosper. Address Dr. John L. Riley, Secy. Board of Trade.

VICTORIA, TEXAS, head of navigation of Guadalupe River; center of cotton, corn, truck and citrus fruit growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

"TAMPA IS THE TOWN TO TIE TO."—Gateway to Gulf; nearest important American port to Panama canal; doubling population every four years; 100 per cent. city of South; big opportunities for investor, manufacturer, homeseeker; tourists' paradise. For literature address W. B. Powell, Secretary Board of Trade, Tampa, Fla.

MANUFACTURERS' OPPORTUNITY.—Free sites; no taxes; cheap natural gas; cheap coal; abundant water supply; best transportation; good town; opportunities for manufacture of furniture, woodenware and novelties, glass, tile and pottery, overalls, iron and steel products, carriages, etc. Write Board of Trade, Grafton, W. Va.

HOUSTON NEEDS a flour mill; free site on the great Houston Ship Channel; also free site for a hardwood manufacturing plant; unlimited raw material at hand; water transportation and seventeen rail lines, and the distributing center for the entire Southwest. Write Adolph Boldt, Secretary Houston Business League, Houston, Texas.

CLINTON, OKLA., wants packing plants, cotton mills, wholesale and jobbing houses of all kinds, manufacturing plants, brick plant, cement plant, sash and door factory, overall factory. Clinton, Okla., offers you first-class shipping facilities; freight rates that will compete with any town in the Middle States territory; best undeveloped jobbing territory in the U. S. today; seven railroad outlets; exemption from municipal taxes, etc. Write Secretary Commercial League.

QUANAH—QUALITY.—City wants wholesale and manufacturing houses. Now have four wholesalers. Jobbers of drugs, dry goods, hardware, badly needed. Has the largest undeveloped trade territory of any city of less than 15,000 people in America. If you are looking for a jobbing center, cast your eyes on Quanah. Also want all kinds manufacturing industries. Three railroads, fourth under construction. Porter A. Whaley, Secretary, Quanah, Texas.

ATTRACTIVE INDUCEMENT TO MANUFACTURERS.—In a substantial and growing town in North Carolina, on the main line of the Southern Railway, where there are now located many prosperous plants, mostly woodworking, the people are ready to negotiate with manufacturers who have textile and other industries to locate which require female labor. The industries now in operation employ male labor, and there is nothing in the town for the good supply of female help. Fine locations on a belt line are available without cost to approved industries. Refer to File 32,248. M. V. Richards, Land and Industrial Agent, Southern Railway, 1375 Pennsylvania avenue, Washington, D. C.

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